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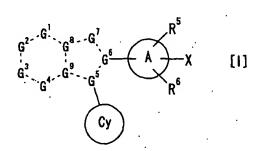
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#### (54) FUSED CYCLIC COMPOUNDS AND MEDICINAL USE THEREOF

(57) The present invention provides a fused ring compound of the following formula [I]



wherein each symbol is as defined in the specification, a pharmaceutically acceptable salt thereof, and a therapeutic agent for hepatitis C, which contains this compound. The compound of the present invention shows an anti-hapatitis C virus (HCV) action based on the HCV polymerase inhibitory activity, and is useful as a therapeutic agent or prophylactic agent for hepatitis C.

John St.

#### Description

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#### **Technical Field**

[0001] The present invention relates to a novel fused ring compound and a pharmaceutically acceptable salt thereof useful as a therapeutic agent for hepatitis C, and to an intermediate compound for the synthesis thereof. The present invention also relates to a novel use of a certain fused ring compound or a pharmaceutically acceptable salt thereof as a therapeutic agent for hepatitis C. More particularly, the present invention relates to a therapeutic agent for hepatitis C, which contains a novel fused ring compound or a pharmaceutically acceptable salt thereof, which is effective for the prophylaxis or treatment of hepatitis C and which shows anti-hepatitis C virus (HCV) activity, particularly anti-HCV activity based on an RNA-dependent RNA polymerase inhibitory activity.

#### **Background Art**

[0002] In 1989, a main causative virus of non-A non-B posttransfusion hepatitis was found and named hepatitis C virus (HCV). Since then, several types of hepatitis viruses have been found besides type A, type B and type C, wherein hepatitis caused by HCV is called hepatitis C.

[0003] The patients infected with HCV are considered to involve several percent of the world population, and the infection with HCV characteristically becomes chronic.

[0004] HCV is an envelope RNA virus, wherein the genome is a single strand plus-strand RNA, and belongs to the genus Hepacivirus of Flavivirus (from The International Committee on Taxonomy of Viruses, International Union of Microbiological Societies). Of the same hepatitis viruses, for example, hepatitis B virus (HBV), which is a DNA virus, is eliminated by the immune system and the infection with this virus ends in an acute infection except for neonates and infants having yet immature immunological competence. In contrast, HCV somehow avoids the immune system of the host due to an unknown mechanism. Once infected with this virus, even an adult having a mature immune system frequently develops persistent infection.

[0005] When chronic hepatitis is associated with the persistent infection with HCV, it advances to cirrhosis or hepatic cancer in a high rate. Enucleation of tumor by operation does not help much, because the patient often develops recurrent hepatic cancer due to the sequela inflammation in non-cancerous parts. In addition, there is a report on the involvement of HCV infection in dermatosis such as chronic urticaria, lichen planus, cryoglobulinemic purpura and the like (The Japanese Journal of Dermatology, 111(7), 1075-81, 2001).

[0006] Thus, an effective therapeutic method of hepatitis C is desired. Apart from the symptomatic therapy to suppress inflammation with an anti-inflammatory agent, the development of a therapeutic agent that reduces HCV to a low level free from inflammation and that eradicates HCV has been strongly demanded.

[0007] At present, a treatment with interferon is the only effective method known for the eradication of HCV. However, interferon can eradicate the virus only in about one-third of the patient population. For the rest of the patients, it has no effect or provides only a temporary effect. Therefore, an anti-HCV drug to be used in the place of or concurrently with interferon is awaited in great expectation.

[0008] In recent years, Ribavirin (1-β-D-ribofuranosyl-1H-1,2,4-triazole-3-carboxamide) has become commercially available as a therapeutic agent for hepatitis C, which is to be used concurrently with interferon. It enhances the efficacy of interferon but only to a low efficacy rate, and a different novel therapeutic agent for hepatitis C is desired.

[0009] Also, an attempt has been made to potentiate the immunocompetence of the patient with an interferon agonist, an interleukin-12 agonist and the like, thereby to eradicate the virus, but an effective pharmaceutical agent has not been found yet.

[0010] In addition, the inhibition of HCV growth, wherein HCV-specific protein is targeted, has been drawing attention these days.

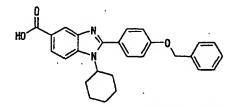
[0011] The gene of HCV encodes a protein such as serine protease, RNA helicase, RNA-dependent RNA polymerase and the like. These proteins function as a specific protein essential for the growth of HCV.

[0012] One of the specific proteins, RNA-dependent RNA polymerase (hereinafter to be also briefly referred to as an HCV polymerase), is an enzyme essential for the growth of the virus. The gene replication of HCV having a plusstrand RNA gene is considered to involve synthesis of a complementary minus-strand RNA by the use of the plusstrand RNA as a template, and, using the obtained minus-strand RNA as a template, amplifying the plus-strand RNA. The portion called NS5B of a protein precursor, that HCV codes for, has been found to show an RNA-dependent RNA polymerase activity (EMBO J., 15, 12-22, 1996), and is considered to play a central role in the HCV gene replication. [0013] Therefore, an HCV polymerase inhibitor can be a target in the development of an anti-HCV drug, and the development thereof is eagerly awaited. However, an effective HCV polymerase inhibitor has not been developed yet, like in other attempts to develop an anti-HCV drug based on other action mechanisms. As the situation stands, no pharmaceutical agent can treat hepatitis C satisfactorily.

[0014] The following discloses known compounds relatively similar to the compound of the present invention.

[0015] The therapeutic agents for hepatitis C, which have a benzimidazole skeleton, are known from JP-A-2001-247550 (WO01/47883, EP1162196A1) and WO02/04425.

[0016] These publications disclose the following  $\beta$ -ketoamide compounds J etc. and K etc., respectively, as anti-HIV agents having an integrase inhibitory activity:



compound K

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[0017] Note that the earliest publication dates of these publications are July 5, 2001 (WO01/47883) and January 17, 2002 (WO02/04425), and the priority date of the present application is June 26, 2001, antedating these publication dates.

[0018] In addition, a known therapeutic agent for hepatitis C having a benzimidazole skeleton is also disclosed in WO97/36866, Japanese Patent Application under PCT laid-open under kohyo No. 2000-511899 (EP906097) and WO99/51619.

[0019] WO97/36866 discloses the following compound D and the like, and HCV helicase inhibitory activity of the compounds.

[0020] Japanese Patent Application.under PCT laid-open under kohyo No. 2000-511899 (EP906097) discloses the following compound E and the like, and WO99/51619 discloses the following compound F and the like, in both of which a possibility of these compounds being effective as an HCV inhibitor is mentioned.

[0021] However, these publications do not include the compound disclosed in the present specification, or a disclosure suggestive thereof.

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compound D

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[0022] A known anti-hepatitis virus agent having a benzimidazole skeleton is disclosed in Japanese Patent Application under PCT laid-open under kohyo No. 2000-503017 (WO97/25316) and Japanese Patent Application under PCT laid-open under kohyo No. 10-505092 (W096/7646).

[0023] WO97/25316 discloses the following compound A and the like, wherein the use thereof is for a treatment of viral infection. The target virus is a DNA virus such as hepatitis B virus and the like. However, this publication does not include the compound disclosed in the present specification or a description regarding or suggestive of HCV.

[0024] Japanese Patent Application under PCT laid-open under kohyo No. 10-505092 discloses the following compound B and the like, wherein the use thereof is for a treatment of viral infection. The target virus is a DNA virus such as herpesvirus and hepatitis B virus. However, this publication does not include the compound disclosed in the present specification or a description regarding or suggestive of HCV.

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[0025] The benzimidazole derivatives having an antiviral activity have been disclosed in JP-A-3-31264, US3644382 and US3778504. In addition, WO98/37072 discloses, as a production inhibitor of tumor necrosis factor (TNF) and cyclic AMP, a benzimidazole derivative for the use as an anti-human immunodeficiency virus (HIV) agent and an anti-inflammation agent. WO98/05327 discloses, as a reverse transcriptase inhibitor, a benzimidazole derivative for the use as an anti-HIV agent. J. Med. Chem. (13(4), 697-704, 1970) discloses, as a neuraminidase inhibitor, a benzimidazole derivative for the use as an anti-influenza virus agent.

[0026] However, none of these publications includes the compound of the present invention or a description regarding or suggestive of an anti-HCV effect.

[0027] Known benzimidazole derivatives having a pharmaceutical use other than as an antiviral agent are disclosed in JP-A-8-501318 (US5814651) and JP-A-8-134073 (US5563143). These publications disclose the following compound C and the like as a catechol diether compound, and the use thereof as an anti-inflammation agent. However, neither of the publications includes the compound of the present invention, and as the action mechanism, the former discloses phosphodiesterase IV and the latter discloses TNF. These publications do not include a description regarding or suggestive of an anti-HCV effect.

[0028] Japanese Patent Application under PCT laid-open under kohyo No. 2000-159749 (EP882718) discloses the following compound G and the like, and the use thereof for the treatment of bronchitis, glomerulonephritis and the like. However, this publication does not include the compound of the present invention, but discloses only a phosphodiesterase IV inhibitory and hypoglycemic action. This publication does not include a description regarding or suggestive of an anti-HCV effect.

[0029] US6211177 discloses the following compound H and the like with their use as antitumor agents. However, this publication does not encompass the compound of the present invention, and does not disclose or suggest an anti-HCV effect.

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20 [0030] WO98/50029, WO98/50030 and WO98/50031 disclose benzimidazole derivatives as an antitumor agent having a protein isoprenyl transferase action. While this publication discloses a wide scope of the claims, at least it does not include a compound analogous to the compound of the present invention or a description regarding or suggestive of an anti-HCV effect.

[0031] JP-A-8-109169 (EP694535) discloses the application of a tachykinin receptor antagonist to treat an inflammatory disease, and WO96/35713 discloses the application thereof as a growth hormone release promoter to treat a growth hormone-related disease such as osteoporosis and the like. However, none of these publications includes a description regarding or suggestive of an anti-HCV effect.

[0032] WO2001/21634 discloses the following compound I in a chemical library. However, this publication does not encompass the compound of the present invention. While it discloses an antimicrobial activity of certain compounds, this publication does not teach or suggest an anti-HCV effect.

[0033] JP-A-53-14735 discloses a benzimidazole derivative as a brightener besides its pharmaceutical use, but this publication does not include the compound of the present invention.

#### Summary of the Invention

[0034] Based on the findings from the preceding studies, it has been elucidated that a pharmaceutical agent having an anti-HCV activity is effective for the prophylaxis and treatment of hepatitis C, and particularly an anti-HCV agent having an inhibitory activity on RNA-dependent RNA polymerase of HCV can be a prophylactic and therapeutic agent effective against hepatitis C and a prophylactic and therapeutic agent for the disease caused by hepatitis C.

[0035] Accordingly, the present invention provides a pharmaceutical agent having an anti-HCV activity, particularly a pharmaceutical agent having an RNA-dependent RNA polymerase inhibitory activity.

[0036] The present inventors have made an in-depth study of compounds having an anti-HCV activity, particularly RNA-dependent RNA polymerase inhibitory activity, and completed the present invention.

[0037] Thus, the present invention provides the following (1) to (87).

(1) A therapeutic agent for hepatitis C, which comprises a fused ring compound of the following formula [I] or a pharmaceutically acceptable salt thereof as an active ingredient:

wherein

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a broken line is a single bond or a double bond,  $G^1$  is  $C(-R^1)$  or a nitrogen atom,  $G^2$  is  $C(-R^2)$  or a nitrogen atom, is  $C(-R^3)$  or a nitrogen atom,

is C(-R<sup>3</sup>) or a nitrogen atom, G<sup>4</sup> is C(-R<sup>4</sup>) or a nitrogen atom,

G<sup>5</sup>, G<sup>6</sup>, G<sup>8</sup> and G<sup>9</sup> are each independently a carbon atom or a nitrogen atom,

G<sup>7</sup> is C(-R<sup>7</sup>), an oxygen atom, a sulfur atom, or a nitrogen atom optionally substituted by R<sup>8</sup>,

wherein R1, R2, R3 and R4 are each independently,

- (1) hydrogen atom,
- (2) C<sub>1-6</sub> alkanoyl,
- (3) carboxyl,
  - (4) cyano,
  - (5) nitro,
  - (6)  $C_{1-6}$  alkyl optionally substituted by 1 to 3 substituent(s) selected from the following group A, group A; halogen atom, hydroxyl group, carboxyl, amino,  $C_{1-6}$  alkoxy,  $C_{1-6}$  al
  - (7)

-COOR<sup>a1</sup>

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wherein  $R^{a1}$  is optionally substituted  $C_{1-6}$  alkyl (as defined above),  $C_{6-14}$  aryl  $C_{1-6}$  alkyl optionally substituted by 1 to 5 substituent(s) selected from the following group B or glucuronic acid residue, group B; halogen atom, cyano, nitro,  $C_{1-6}$  alkyl, halogenated  $C_{1-6}$  alkyl,  $C_{1-6}$  alkanoyl,  $-(CH_2)_r$ -COOR<sup>b1</sup>,  $-(CH_2)_r$ -CONR<sup>b1</sup>R<sup>b2</sup>,  $-(CH_2)_r$ -NR<sup>b1</sup>R<sup>b2</sup>,  $-(CH_2)_r$ -NR<sup>b1</sup>COR<sup>b2</sup>,  $-(CH_2)_r$ -NR<sup>b1</sup>R<sup>b2</sup>,  $-(CH_2)_r$ -OR<sup>b1</sup>,  $-(CH_2)_r$ -OR<sup>b1</sup>,  $-(CH_2)_r$ -SR<sup>b1</sup>,  $-(CH_2)_r$ -SR<sup>b1</sup>,  $-(CH_2)_r$ -SO<sub>2</sub>RR<sup>b1</sup> and  $-(CH_2)_r$ -SO<sub>2</sub>NR<sup>b1</sup>R<sup>b2</sup> wherein R<sup>b1</sup> and R<sup>b2</sup> are each independently hydrogen atom or  $C_{1-6}$  alkyl and r is 0 or an integer of 1 to 6,

-CONR<sup>a2</sup>R<sup>a3</sup>

wherein  $R^{a2}$  and  $R^{a3}$  are each independently hydrogen atom,  $C_{1-6}$  alkoxy or optionally substituted  $C_{1-6}$  alkyl (9)

(9

-C(=NR<sup>a4</sup>)NH<sub>2</sub>

wherein  $R^{a4}$  is hydrogen atom or hydroxyl group, (10)

-NHR<sup>a5</sup>

wherein Ra5 is hydrogen atom, C<sub>1-6</sub> alkanoyl or C<sub>1-6</sub> alkylsulfonyl,

(11)

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-OR<sup>a6</sup>

wherein  $R^{a6}$  is hydrogen atom or optionally substituted  $C_{1-6}$  alkyl (as defined above),

(12)

-SO<sub>2</sub>R<sup>a7</sup>

wherein Ra7 is hydroxyl group, amino, C<sub>1-6</sub> alkyl or C<sub>1-6</sub> alkylamino,

(13)

-P(=O)(OR<sup>a31</sup>)<sub>2</sub>

wherein  $R^{a31}$  is hydrogen atom, optionally substituted  $C_{1-6}$  alkyl (as defined above) or  $C_{6-14}$  aryl  $C_{1-6}$  alkyl optionally substituted by 1 to 5 substituent(s) selected from the above group B

(14) heterocyclic group having 1 to 4 heteroatom(s) selected from an oxygen atom, a nitrogen atom and a sulfur atom, and

R<sup>7</sup> and R<sup>8</sup> are each hydrogen atom or optionally substituted C<sub>1-6</sub> alkyl (as defined above),

ring Cy is

(1)  $C_{3-8}$  cycloalkyl optionally substituted by 1 to 5 substituent(s) selected from the following group C, group C; hydroxyl group, halogen atom,  $C_{1-6}$  alkyl and  $C_{1-6}$  alkoxy,

(2) C<sub>3-8</sub> cycloalkenyl optionally substituted by 1 to 5 substituent(s) selected from the above group C, or

(3)

wherein u and v are each independently an integer of 1 to 3,

ring A is

(1) C<sub>6-14</sub> aryl,

(2) C<sub>3-8</sub> cycloalkyl,

(3) C<sub>3-8</sub> cycloalkenyl or

(4) heterocyclic group having 1 to 4 heteroatom(s) selected from an oxygen atom, a nitrogen atom and a sulfur atom,

R5 and R6 are each independently (1) hydrogen atom, (2) halogen atom, 5 (3) optionally substituted  $C_{1-6}$  alkyl (as defined above) or (4) -OR<sup>a8</sup> 10 wherein  $\rm R^{a8}$  is hydrogen atom,  $\rm C_{1-6}$  alkyl or  $\rm C_{6-14}$  aryl  $\rm C_{1-6}$  alkyl, and Х is 15 (1) hydrogen atom, (2) halogen atom, (3) cyano, (4) nitro, (5) amino, C<sub>1-6</sub> alkanoylamino, 20 (6) C<sub>1-6</sub> alkylsulfonyl, (7) optionally substituted C<sub>1-6</sub> alkyl (as defined above), (8) C<sub>2-6</sub> alkenyl optionally substituted by 1 to 3 substituent(s) selected from the above group A, 25 -COOR<sup>a9</sup> wherein  $R^{a9}$  is hydrogen atom or  $C_{1-6}$  alkyl, (10)30 -CONH- (CH<sub>2</sub>)<sub>I</sub>-R<sup>a10</sup> wherein  $R^{a10}$  is optionally substituted  $C_{1-6}$  alkyl (as defined above),  $C_{1-6}$  alkoxycarbonyl or  $C_{1-6}$ 35 alkanoylamino and I is 0 or an integer of 1 to 6, (11) -OR<sup>a11</sup> 40 wherein  $R^{a11}$  is hydrogen atom or optionally substituted  $C_{1-6}$  alkyl (as defined above) or (12)45 50 wherein ring B is (1') C<sub>6-14</sub> aryl, (2') C<sub>3-8</sub> cycloalkyl or 55 (3') heterocyclic group (as defined above), each Z is independently

(1') a group selected from the following group D, (2') C<sub>6-14</sub> aryl optionally substituted by 1 to 5 substituent(s) selected from the following group D, (3') C<sub>3-8</sub> cycloalkyl optionally substituted by 1 to 5 substituent(s) selected from the following group D, (4') C<sub>6-14</sub> aryl C<sub>1-6</sub> alkyl optionally substituted by 1 to 5 substituent(s) selected from the following group D, (5') heterocyclic group optionally substituted by 1 to 5 substituent(s) selected from the following group D. wherein the heterocyclic group has 1 to 4 hetero-atom(s) selected from an oxygen atom, a 10 nitrogen atom and a sulfur atom, or (6') heterocycle C<sub>1-6</sub> alkyl optionally substituted by 1 to 5 substituent(s) selected from the following group D, wherein the heterocycle C<sub>1-6</sub> alkyl is C<sub>1-6</sub> alkyl substituted by heterocyclic group optionally substituted by 1 to 5 substituent(s) selected from the group D, as defined above, 15 group D: (a) hydrogen atom, (b) halogen atom, (c) cyano, 20 (d) nitro, (e) optionally substituted C<sub>1-6</sub> alkyl (as defined above), -(CH<sub>2</sub>)<sub>t</sub>-COR<sup>a18</sup>, 25 (hereinafter each t means independently 0 or an integer of 1 to 6), wherein Ra18 is 30 (1") optionally substituted C<sub>1-6</sub> alkyl (as defined above), (2") C<sub>6-14</sub> aryl optionally substituted by 1 to 5 substituent(s) selected from the above group B or (3") heterocyclic group optionally substituted by 1 to 5 substituent(s) selected from the above group B 35 wherein the heterocyclic group has 1 to 4 heteroatom(s) selected from an oxygen atom, a nitrogen atom and a sulfur atom, (g) 40 -(CH<sub>2</sub>)<sub>t</sub>-COOR<sup>a19</sup> wherein Ra19 is hydrogen atom, optionally substituted C1-6 alkyl (as defined above) or  $C_{6-14}$  aryl  $C_{1-6}$  alkyl optionally substituted by 1 to 5 substituent(s) selected from the above group B, 45 (h) -(CH<sub>2</sub>)<sub>1</sub>-CONR<sup>a27</sup>R<sup>a28</sup> 50 wherein Ra27 and Ra28 are each independently, (1") hydrogen atom, (2") optionally substituted C<sub>1-6</sub> alkyl (as defined above), 55 (3") C<sub>6-14</sub> aryl optionally substituted by 1 to 5 substituent(s) selected from the above (4")  $C_{6-14}$  aryl  $C_{1-6}$  alkyl optionally substituted by 1 to 5 substituent(s) selected from

the above group B,

(5") heterocyclic group optionally substituted by 1 to 5 substituent(s) selected from the above group B. (6") heterocycle C<sub>1-6</sub> alkyl optionally substituted by 1 to 5 substituent(s) selected from the above group B, 5 wherein the heterocycle  $C_{1-6}$  alkyl is  $C_{1-6}$  alkyl substituted by heterocyclic group optionally substituted by 1 to 5 substituent(s) selected from the above group B, as (7")  $C_{3-8}$  cycloalkyl optionally substituted by 1 to 5 substituent(s) selected from the above group B, 10 (8")  $C_{3-8}$  cycloalkyl  $C_{1-6}$  alkyl optionally substituted by 1 to 5 substituent(s) selected from the above group B, (9") hydroxyl group or (10") C<sub>1-6</sub> alkoxy, 15 (i) -(CH<sub>2</sub>)<sub>t</sub>-C(=NR<sup>a33</sup>)NH<sub>2</sub> 20 wherein  $R^{a33}$  is hydrogen atom,  $C_{1-6}$  alkyl, hydroxyl group or  $C_{1-6}$  alkoxy, (j) -(CH<sub>2</sub>),-OR<sup>a20</sup> 25 wherein Ra20 is (1") hydrogen atom. (2") optionally substituted C<sub>1-6</sub> alkyl (as defined above), 30 (3") optionally substituted C<sub>2-6</sub> alkenyl (as defined above), (4") C<sub>2-6</sub> alkynyl optionally substituted by 1 to 3 substituent(s) selected from the above group A. (5")  $C_{6-14}$  aryl optionally substituted by 1 to 5 substituent(s) selected from the above group B, 35 (6")  $C_{6-14}$  aryl  $C_{1-6}$  alkyl optionally substituted by 1 to 5 substituent(s) selected from the above group B, (7") heterocyclic group optionally substituted by 1 to 5 substituent(s) selected from the above group B. (8") heterocycle C<sub>1-6</sub> alkyl optionally substituted by 1 to 5 substituent(s) selected 40 from the above group B, (9") C<sub>3-8</sub> cycloalkyl optionally substituted by 1 to 5 substituent(s) selected from the above group B, or (10")  $C_{3-8}$  cycloalkyl  $C_{1-6}$  alkyl optionally substituted by 1 to 5 substituent(s) selected from the above group B, 45 (k) -(CH<sub>2</sub>)<sub>t</sub>-O-(CH<sub>2</sub>)<sub>p</sub>-COR<sup>a21</sup> 50 wherein  $R^{a21}$  is amino,  $C_{1-6}$  alkylamino or heterocyclic group optionally substituted by 1 to 5 substituent(s) selected from the above group B, and p is 0 or an integer of 1 to 6, (1) 55 -(CH<sub>2</sub>),-NR<sup>a22</sup>R<sup>a23</sup> wherein Ra22 and Ra23 are each independently

(1") hydrogen atom, (2") optionally substituted C<sub>1-6</sub> alkyl (as defined above), (3") C<sub>6-14</sub> aryl optionally substituted by 1 to 5 substituent(s) selected from the above group B, 5 (4")  $C_{6-14}$  aryl  $C_{1-6}$  alkyl optionally substituted by 1 to 5 substituent(s) selected from the above group B, (5") heterocycle C<sub>1-6</sub> alkyl optionally substituted by 1 to 5 substituent(s) selected from the above group B or (6") heterocyclic group optionally substituted by 1 to 5 substituent(s) selected from 10 the above group B, (m) -(CH<sub>2</sub>)<sub>t</sub>-NR<sup>a29</sup>CO-R<sup>a24</sup> 15 wherein Ra29 is hydrogen atom, C1-6 alkyl or C1-6 alkanoyl, and Ra24 is (1") amino, 20 (2") C<sub>1-6</sub> alkylamino, (3") optionally substituted C<sub>1-6</sub> alkyl (as defined above), (4") C<sub>6-14</sub> aryl optionally substituted by 1 to 5 substituent(s) selected from the above group B. (5") heterocyclic group optionally substituted by 1 to 5 substituent(s) selected from 25 the above group B or (6") heterocycle  $C_{1-6}$  alkyl optionally substituted by 1 to 5 substituent(s) selected from the above group B. (n) 30 -(CH<sub>2</sub>)<sub>t</sub>-NR<sup>a29</sup>SO<sub>2</sub>-R<sup>a25</sup> wherein Ra29 is as defined above, and Ra25 is hydrogen atom, optionally substituted 35 C<sub>1-6</sub> alkyl (as defined above), C<sub>6-14</sub> aryl optionally substituted by 1 to 5 substituent(s) selected from the above group B or heterocyclic group optionally substituted by 1 to 5 substituent(s) selected from the above group B, (o) 40 -(CH<sub>2</sub>)<sub>t</sub>-S(O)<sub>a</sub>-R<sup>a25</sup> wherein Ra25 is as defined above, and q is 0, 1 or 2, (p) 45 -(CH2)1-SO2-NHRa26 wherein Ra26 is hydrogen atom, optionally substituted C1-6 alkyl (as defined above), C<sub>6-14</sub> aryl optionally substituted by 1 to 5 substituent(s) selected from the above group 50 B or heterocyclic group optionally substituted by 1 to 5 substituent(s) selected from the above group B, and (q) heterocyclic group having 1 to 4 heteroatom(s) selected from an oxygen atom, a 55 nitrogen atom and a sulfur atom, and

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w is an integer of 1 to 3, and

Y is

	<ul> <li>(1') a single bond,</li> <li>(2') C<sub>1-6</sub> alkylene,</li> <li>(3') C<sub>2-6</sub> alkenylene,</li> <li>(4')</li> </ul>
5	. ,
	-(CH <sub>2</sub> ) <sub>m</sub> -O-(CH <sub>2</sub> ) <sub>n</sub> -,
10	(hereinafter m and n are each independently 0 or an integer of 1 to 6), (5')
	-CO-,
15	(6')
	-CO <sub>2</sub> -(CH <sub>2</sub> ) <sub>n</sub> -,
20	(7')
	-CONH- (CH <sub>2</sub> ) <sub>n</sub> -NH-,
25	(8')
	-NHCO <sub>2</sub> -,
30	(9')
	-NHCONH-,
35	(10')
	-O-(CH <sub>2</sub> ) <sub>n</sub> -CO-,
40	(11')
	-O-(CH <sub>2</sub> ) <sub>n</sub> -O-,
45	(12')
	-SO <sub>2</sub> -,
50	(13')
	$-(CH_2)_m$ -NR $^{a12}$ - $(CH_2)_n$ -
55	wherein R <sup>a12</sup> is
	<ul><li>(1") hydrogen atom,</li><li>(2") optionally substituted C<sub>1-6</sub> alkyl (as defined above),</li></ul>

	(3") C <sub>6-14</sub> aryl C <sub>1-6</sub> alkyl optionally substituted by 1 to 5 substituent(s) selected from the above group B, (4") C <sub>6-14</sub> aryl optionally substituted by 1 to 5 substituent(s) selected from the above group B,
, · · · · · · · · · · · · · · · · · ·	(5°)
•	-COR <sup>b5</sup>
10	wherein $R^{b5}$ is hydrogen atom, optionally substituted $C_{1-6}$ alkyl (as defined above), $C_{6-14}$ aryl optionally substituted by 1 to 5 substituent(s) selected from the above group B or $C_{6-14}$ aryl $C_{1-6}$ alkyl optionally substituted by 1 to 5 substituent(s) selected from the above group B, (6")
15	-COOR <sup>b5</sup>
	(R <sup>b5</sup> is as defined above) or (7")
20	-SO₂R <sup>b5</sup>
	(R <sup>b5</sup> is as defined above) ,
25	(14')
	-NR <sup>a12</sup> CO-
30	(R <sup>a12</sup> is as defined above), (15')
	-CONR <sup>a13</sup> -(CH <sub>2</sub> ) <sub>n</sub> -
35	wherein $R^{a13}$ is hydrogen atom, optionally substituted $C_{1-6}$ alkyl (as defined above) or $C_{6-14}$ aryl $C_{1-6}$ alkyl optionally substituted by 1 to 5 substituent(s) selected from the above group B, (16')
40	-CONH-CHR <sup>a14</sup> -
45	wherein $R^{a14}$ is $C_{6-14}$ aryl optionally substituted by 1 to 5 substituent(s) selected from the above group B, (17')
	-O-(CH <sub>2</sub> ) <sub>m</sub> -CR <sup>a15</sup> R <sup>a16</sup> -(CH <sub>2</sub> ) <sub>n</sub> -
50	wherein R <sup>a15</sup> and R <sup>a16</sup> are each independently
	(1") hydrogen atom, (2") carboxyl, (3") C <sub>1-6</sub> alkyl,
55	(4")
	-OR <sup>b6</sup>

wherein  $\mathsf{R}^{\mathsf{b6}}$  is  $\mathsf{C}_{\mathsf{1-6}}$  alkyl or  $\mathsf{C}_{\mathsf{6-14}}$  aryl  $\mathsf{C}_{\mathsf{1-6}}$  alkyl, or (5")

.

wherein  $R^{b7}$  is hydrogen atom,  $C_{1-6}$  alkyl,  $C_{1-6}$  alkanoyl or  $C_{6-14}$  aryl  $C_{1-6}$  alkyloxycarbonyl, or  $R^{a15}$  is optionally

-NHR<sup>b7</sup>

(6")

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 $-(CH_2)_{n'} B' - (Z')_{W}$ 

wherein n', ring B', Z' and w' are the same as the above-mentioned n, ring B, Z and w, respectively, and may be the same as or different from the respective counterparts,

(18')

(Ra12 and Ra15 are each as defined above), (19')

wherein R<sup>a17</sup> is hydrogen atom or C<sub>1-6</sub> alkyl, (20')

(e is 0, 1 or 2,  $R^{a15}$  and  $R^{a16}$  are each as defined above), or (21')

(Ra15 and Ra16 are each as defined above).

- (2) The therapeutic agent of (1) above, wherein 1 to 4 of the G<sup>1</sup>, G<sup>2</sup>, G<sup>3</sup>, G<sup>4</sup>, G<sup>5</sup>, G<sup>6</sup>, G<sup>7</sup>, G<sup>8</sup> and G<sup>9</sup> is (are) a nitrogen atom.
  - (3) The therapeutic agent of (2) above, wherein G2 is C(-R2) and G6 is a carbon atom.
  - (4) The therapeutic agent of (2) or (3) above, wherein G<sup>5</sup> is a nitrogen atom.
  - (5) The therapeutic agent of (1) above, wherein, in formula [I], the moiety

G<sup>2</sup>-G<sup>1</sup>, G<sup>8</sup>-G<sup>7</sup>, G<sup>6</sup>-G<sup>5</sup>

is a fused ring selected from

5

$$R^{2}$$
 $R^{3}$ 
 $R^{4}$ 
 $R^{2}$ 
 $R^{4}$ 
 $R^{2}$ 
 $R^{4}$ 
 $R^{2}$ 
 $R^{4}$ 
 $R^{2}$ 
 $R^{4}$ 
 $R^{2}$ 
 $R^{4}$ 
 $R^{4}$ 
 $R^{2}$ 
 $R^{4}$ 
 $R$ 

(6) The therapeutic agent of (5) above, wherein, in formula [I], the moiety

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is a fused ring selected from

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(7) The therapeutic agent of (6) above, which comprises a fused ring compound of the following formula [I-1]

wherein each symbol is as defined in (1), or a pharmaceutically acceptable salt thereof as an active ingredient.

(8) The therapeutic agent of (6) above, which comprises a fused ring compound of the following formula [I-2]

$$\begin{array}{c|c}
R^2 & & \\
\hline
 & N \\
\hline
 & R^5 \\
\hline
 & R^6
\end{array}$$
[1-2]

wherein each symbol is as defined in (1),

or a pharmaceutically acceptable salt thereof as an active ingredient.

(9) The therapeutic agent of (6) above, which comprises a fused ring compound of the following formula [I-3]

$$\begin{array}{c|c}
R^2 & & \\
\hline
 R^3 & & \\
\hline
 N & & \\
\hline
 R^5 & & \\
\hline
 R^6 & & \\
\hline
 Cy & & \\
\hline
 R^6 & & \\
\hline
 Cy & & \\
\hline
 R^6 & & \\
\hline
 R^6 & & \\
\hline
 R^7 &$$

wherein each symbol is as defined in (1), or a pharmaceutically acceptable salt thereof as an active ingredient.

(10) The therapeutic agent of (6) above, which comprises a fused ring compound of the following formula [I-4]

wherein each symbol is as defined in (1),

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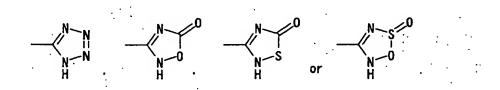
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or a pharmaceutically acceptable salt thereof as an active ingredient.

(11) The therapeutic agent of any of (1) to (10) above, wherein at least one of  $R^1$ ,  $R^2$ ,  $R^3$  and  $R^4$  is carboxyl,  $-COOR^{a_1}$ ,  $-CONR^{a_2}R^{a_3}$ ,  $-SO_2R^{a_7}$  (wherein  $R^{a_1}$ ,  $R^{a_2}$ ,  $R^{a_3}$  and  $R^{a_7}$  are as defined in (1)),



(12) The therapeutic agent of (11) above, wherein at least one of  $R^1$ ,  $R^2$ ,  $R^3$  and  $R^4$  is carboxyl, -COORa1, -CONRa2Ra3 or -SO<sub>2</sub>Ra7 wherein  $R^{a1}$ ,  $R^{a2}$ ,  $R^{a3}$  and  $R^{a7}$  are as defined in (1).

(13) The therapeutic agent of any of (1) to (10) above, wherein at least one of R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup> and R<sup>4</sup> is -COOR<sup>a1</sup> wherein R<sup>a1</sup> is glucuronic acid residue.

(14) The therapeutic agent of any of (1) to (10) above, wherein at least one of R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup> and R<sup>4</sup> is heterocyclic group having 1 to 4 heteroatom(s) selected from an oxygen atom, a nitrogen atom and a sulfur atom.

(15) The therapeutic agent of any of (1) to (14) above, wherein the ring Cy is cyclopentyl, cyclohexyl, cycloheptyl, tetrahydrothiopyranyl or piperidino.

(16) The therapeutic agent of any of (1) to (14) above, wherein the ring Cy is

wherein each symbol is as defined in (1).

(17) The therapeutic agent of any of (1) to (16) above, wherein the ring A is  $C_{8-14}$  aryl.

(18) The therapeutic agent of any of (1) to (17) above, wherein at least one substituent optionally substituted by group A is a substituent substituted by  $C_{1-6}$  alkoxy  $C_{1-6}$  alkoxy.

(19) The therapeutic agent of any of (1) to (17) above, wherein the Y is  $-(CH_2)_m$ - $CR^{a15}R^{a16}$ - $(CH_2)_n$ - wherein each symbol is as defined in (1).

(20) The therapeutic agent of any of (1) to (19) above, wherein at least one group represented by Z is heterocycle C<sub>1-6</sub> alkyl optionally substituted by 1 to 5 substituent(s) selected from the group D.

(21) The therapeutic agent of any of (1) to (19) above, wherein at least one group represented by Z is a heterocyclic group optionally substituted by 1 to 5 substituent(s) selected from the group D, wherein said heterocyclic group is selected from the following groups:

wherein E<sup>1</sup> is an oxygen atom, a sulfur atom or N(-R<sup>a35</sup>), E<sup>2</sup> is an oxygen atom, CH<sub>2</sub> or N(-R<sup>a35</sup>), E<sup>3</sup> is an oxygen

atom or a sulfur atom.

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wherein each  $R^{a35}$  is independently hydrogen atom or  $C_{1-6}$  alkyl, f is an integer of 1 to 3, and h and h' are the same or different and each is an integer of 1 to 3.

(22) The therapeutic agent of (21) above, wherein at least one group represented by Z is heterocyclic group optionally substituted by 1 to 5 substituent(s) selected from the group D wherein said heterocyclic group is selected from the following groups:

$$-N \xrightarrow{\downarrow} f \xrightarrow{0} f \xrightarrow{0} f \xrightarrow{0} f$$
and
$$-N \xrightarrow{\downarrow} f \xrightarrow{0} f$$

wherein each symbol is as defined in (21).

(23) The therapeutic agent of any of (1) to (19) above, wherein at least one group represented by group D is  $-(CH_2)_t$ -CONR<sup>a27</sup>R<sup>a28</sup> wherein each symbol is as defined in (1), and at least one of R<sup>a27</sup> and R<sup>a28</sup> is C<sub>1-6</sub> alkoxy. (24) The therapeutic agent of any of (1) to (19) above, wherein. at least one group represented by group D is  $-(CH_2)_t$ -C(=NR<sup>a33</sup>)NH<sub>2</sub> wherein each symbol is as defined in (1), and R<sup>a33</sup> is hydroxyl group or C<sub>1-6</sub> alkoxy.

(25) The therapeutic agent of any of (1) to (19) above, wherein at least one group represented by group D is  $-(CH_2)_1-O-(CH_2)_0-COR^{a21}$ , wherein each symbol is as defined in (1), and  $R^{a21}$  is amino.

(26) The therapeutic agent of any of (1) to (19) above, wherein at least one group represented by group D is  $-(CH_2)_t-NR^{a29}CO-R^{a24}$  wherein each symbol is as defined in (1), and  $R^{a24}$  is amino or  $C_{1-6}$  alkylamino.

(27) The therapeutic agent of any of (1) to (19) above, wherein at least one group represented by group D is  $-(CH_2)_1-NR^{a22}R^{a23}$  wherein each symbol is as defined in claim 1, and at least one of  $R^{a22}$  and  $R^{a23}$  is amino or  $C_{1-6}$  alkylamino.

(28) The therapeutic agent of any of (1) to (19) above, wherein at least one group represented by group D is heterocyclic group having 1 to 4 heteroatom(s) selected from an oxygen atom, a nitrogen atom and a sulfur atom. (29) A fused ring compound of the following formula [II]

 $G^{2} - G^{\frac{1}{2}} - G^{\frac{9}{2}} - G^{\frac{7}{2}} - G^{\frac{6}{2}} - G^{\frac{7}{2}} - G^{\frac{6}{2}} - G^{\frac{7}{2}} - G^{\frac{1}{2}} - G^{\frac{1$ 

wherein the moiety

is a fused ring selected from

wherein R1, R2, R3 and R4 are each independently,

- (1) hydrogen atom,
- (2) C<sub>1-6</sub> alkanoyl,
- (3) carboxyl,
- (4) cyano,
- (5) nitro,
- (6)  $C_{1-6}$  alkyl optionally substituted by 1 to 3 substituent(s) selected from the following group A, group A; halogen atom, hydroxyl group, carboxyl, amino,  $C_{1-6}$  alkoxy,  $C_{1-6}$  alkoxy,  $C_{1-6}$  alkoxy,  $C_{1-6}$  alkoxycarbonyl and  $C_{1-6}$  alkylamino,

(7)

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#### -COOR<sup>a1</sup>

wherein Ra1 is optionally substituted C<sub>1-6</sub> alkyl (as defined above), C<sub>6-14</sub> aryl C<sub>1-6</sub> alkyl optionally substituted by 1 to 5 substituent(s) selected from the following group B or glucuronic acid residue, group B; halogen atom, cyano, nitro, C<sub>1-6</sub> alkyl, halogenated C<sub>1-6</sub> alkyl, C<sub>1-6</sub> alkanoyl, - (CH<sub>2</sub>)<sub>r</sub>-COORb1, -(CH<sub>2</sub>)<sub>r</sub>-CONRb1Rb2, -(CH<sub>2</sub>)<sub>r</sub>-NRb1-CORb2, -(CH<sub>2</sub>)<sub>r</sub>-NHSO<sub>2</sub>Rb1, -(CH<sub>2</sub>)<sub>r</sub>-ORb1, - (CH<sub>2</sub>)<sub>r</sub>-SRb1, -(CH<sub>2</sub>)<sub>r</sub>-SO<sub>2</sub>Rb1 and -(CH<sub>2</sub>)<sub>r</sub>-SO<sub>2</sub>NRb1Rb2 wherein Rb1 and Rb2 are each independently hydrogen atom or C<sub>1-6</sub> alkyl and r is 0 or an integer of 1 to 6, (8)

#### -CONR<sup>a2</sup>R<sup>a3</sup>

wherein  $R^{a2}$  and  $R^{a3}$  are each independently hydrogen atom,  $C_{1-6}$  alkoxy or optionally substituted  $C_{1-6}$  alkyl (as defined above), (9)

-C(=NR<sup>a4</sup>)NH<sub>2</sub>

wherein R<sup>a4</sup> is hydrogen atom or hydroxyl group, (10)

-NHR<sup>a5</sup>

wherein  $R^{a5}$  is hydrogen atom,  $C_{1-6}$  alkanoyl or  $C_{1-6}$  alkylsulfonyl, (11)

# -OR<sup>a6</sup>

wherein Ra6 is hydrogen atom or optionally substituted C<sub>1-6</sub> alkyl (as defined above), (12)

# -SO<sub>2</sub>R<sup>a7</sup>

wherein  $R^{a7}$  is hydroxyl group, amino,  $C_{1-6}$  alkyl or  $C_{1-6}$  alkylamino, (13)

 $-P(=O)(OR^{a31})_2$ 

wherein  $R^{a31}$  is hydrogen atom, optionally substituted  $C_{1-6}$  alkyl (as defined above) or  $C_{6-14}$  aryl  $C_{1-6}$  alkyl optionally substituted by 1 to 5 substituent(s) selected from the above group B, or

(14) heterocyclic group having 1 to 4 heteroatom(s) selected from an oxygen atom, a nitrogen atom and a sulfur atom, and

R7 is hydrogen atom or optionally substitute C<sub>1-6</sub> alkyl (as defined above),

ring Cy' is

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(1)  $C_{3-8}$  cycloalkyl optionally substituted by 1 to 5 substituent(s) selected from the following group C, group C; hydroxyl group, halogen atom,  $C_{1-6}$  alkyl and  $C_{1-6}$  alkoxy, or (2)

 $(\langle u \rangle)_{v} (\langle u \rangle)_{v}$ 

wherein u and v are each independently an integer

of 1 to 3,

is a group selected from a group consisting of phenyl, pyridyl, pyrazinyl, pyrimidinyl, pyridazinyl,

cyclohexyl, cyclohexenyl, furyl and thienyl,

R5' and R6' are each independently

- (1) hydrogen atom,
- (2) halogen atom,
- (3) optionally substituted C<sub>1-6</sub> alkyl (as defined above) or
- (4) hydroxyl group

ring B is

ring A'

(1) C<sub>6-14</sub> aryl,

- (2) C<sub>3-8</sub> cycloalkyl or
- (3) heterocyclic group having 1 to 4 heteroatom(s) selected from an oxygen atom, a nitrogen atom and a sulfur atom,
- 50 each Z is independently
  - (1) a group selected from the following group D,
  - (2) C<sub>6-14</sub> aryl optionally substituted by 1 to 5 substituent(s) selected from the following group D,
  - (3) C<sub>3-8</sub> cycloalkyl optionally substituted by 1 to 5 substituent(s) selected from the following group D,
  - (4)  $C_{6-14}$  arryl  $C_{1-6}$  alkyl optionally substituted by 1 to 5 substituent(s) selected from the following group D.
  - (5) heterocyclic group optionally substituted by 1 to 5 substituent(s) selected from the following

group D wherein the.heterocyclic group has 1 to 4 heteroatom(s) selected from an oxygen atom, a nitrogen atom and a sulfur atom, or

- (6) heterocycle  $C_{1-6}$  alkyl optionally substituted by 1 to 5 substituent(s) selected from the following group D wherein the heterocycle  $C_{1-6}$  alkyl is  $C_{1-6}$  alkyl substituted by heterocyclic group optionally substituted by 1 to 5 substituent(s) selected from the group D, as defined above, group D:
  - (a) hydrogen atom,
  - (b) halogen atom,
  - (c) cyano,
  - (d) nitro,
  - (e) optionally substituted C<sub>1-6</sub> alkyl (as defined above),
  - (f)

-(CH<sub>2</sub>)<sub>1</sub>-COR<sup>a18</sup>,

(hereinafter each t means independently 0 or an integer of 1 to 6), wherein Ra18 is

- (1') optionally substituted  $C_{1-6}$  alkyl (as defined above),
- (2')  $\mathrm{C}_{6\text{-}14}$  aryl optionally substituted by 1 to 5 substituent(s) selected from the above group B or
- (3') heterocyclic group optionally substituted by 1 to 5 substituent(s) selected from the above group B

wherein the heterocyclic group has 1 to 4 heteroatom(s) selected from an oxygen atom, a nitrogen atom and a sulfur atom,

(g)

-(CH<sub>2</sub>)<sub>t</sub>-COOR<sup>a19</sup>

wherein  $R^{a19}$  is hydrogen atom, optionally substituted  $C_{1-6}$  alkyl (as defined above) or  $C_{6-14}$  aryl  $C_{1-6}$  alkyl optionally substituted by 1 to 5 substituent(s) selected from the above group B, (h)

 $\text{-(CH}_2)_{\text{t}}\text{-CONR}^{\text{a27}}\text{R}^{\text{a28}}$ 

wherein Ra27 and Ra28 are each independently,

- (1') hydrogen atom,
- (2') optionally substituted  $C_{1-6}$  alkyl (as defined above),
- (3')  $\mathrm{C}_{6\text{-}14}$  aryl optionally substituted by 1 to 5 substituent(s) selected from the above group B,
- (4')  $\rm C_{6-14}$  aryl  $\rm C_{1-6}$  alkyl optionally substituted by 1 to 5 substituent(s) selected from the above group B,
- (5') heterocyclic group optionally substituted by 1 to 5 substituent(s) selected from the above group B,
- (6') heterocycle  $C_{1-6}$  alkyl optionally substituted by 1 to 5 substituent(s) selected from the above group B,

wherein the heterocycle  $C_{1-6}$  alkyl is  $C_{1-6}$  alkyl substituted by heterocyclic group optionally substituted by 1 to 5 substituent(s) selected from the above group B, as defined above,

- (7')  $C_{3-8}$  cycloalkyl optionally substituted by 1 to 5 substituent(s) selected from the above group B,
- (8') C<sub>3-8</sub> cycloalkyl C<sub>1-6</sub> alkyl optionally substituted by 1 to 5 substituent(s) selected

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from the above group B, (9') hydroxyl group or (10') C<sub>1-6</sub> alkoxy,

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wherein  $R^{a33}$  is hydrogen atom,  $C_{1-6}$  alkyl, hydroxyl group or  $C_{1-6}$  alkoxy, (j)

.-(CH<sub>2</sub>)<sub>t</sub>-OR<sup>a20</sup>

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wherein Ra20 is

(i)

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- (1') hydrogen atom,
- (2') optionally substituted C<sub>1-6</sub> alkyl (as defined above),
- (3') optionally substituted C<sub>2-6</sub> alkenyl (as defined above),
- (4')  $C_{2-6}$  alkynyl optionally substituted by 1 to 3 substituent(s) selected from the above group A,
- (5')  $\mathrm{C}_{6\text{-}14}$  aryl optionally substituted by 1 to 5 substituent(s) selected from the above group B,
- (6')  $C_{6-14}$  aryl  $C_{1-6}$  alkyl optionally substituted by 1 to 5 substituent(s) selected from the above group B,
- (7') heterocyclic group optionally substituted by 1 to 5 substituent(s) selected from the above group B,
- (8') heterocycle  $C_{1-6}$  alkyl optionally substituted by 1 to 5 substituent(s) selected from the above group B,
- (9')  $C_{3-8}$  cycloalkyl optionally substituted by 1 to 5 substituent(s) selected from the above group B, or
- (10')  $C_{3-8}$  cycloalkyl  $C_{1-6}$  alkyl optionally substituted by 1 to 5 substituent(s) selected from the above group B,

(k)

(I)

$$-(CH_2)_t$$
-O- $(CH_2)_p$ -COR<sup>a21</sup>

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wherein  $R^{a21}$  is amino,  $C_{1-6}$  alkylamino or heterocyclic group optionally substituted by 1 to 5 substituent(s) selected from the above group B, and p is 0 or an integer of 1 to 6,

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$$-(CH_2)_t$$
-NR $^{a22}$ R $^{a23}$ 

wherein Ra22 and Ra23 are each independently

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- (1') hydrogen atom,
- (2') optionally substituted C<sub>1-6</sub> alkyl (as defined above),

- (3')  $C_{6-14}$  aryl optionally substituted by 1 to 5 substituent(s) selected from the above group B,
- (4')  $C_{6-14}$  aryl  $C_{1-6}$  alkyl optionally substituted by 1 to 5 substituent(s) selected from the above group B,
- (5') heterocycle  $C_{1-6}$  alkyl optionally substituted by 1 to 5 substituent(s) selected from the above group B or

(6') heterocyclic group optionally substituted by 1 to 5 substituent(s) selected from the above group B,

(m)

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wherein  $R^{a29}$  is hydrogen atom,  $C_{1\text{-}6}$  alkyl or  $C_{1\text{-}6}$  alkanoyl, and  $R^{a24}$  is

- (1') amino,
- (2') C<sub>1-6</sub> alkylamino,
- (3') optionally substituted C<sub>1-6</sub> alkyl (as defined above),
- (4')  $C_{6-14}$  aryl optionally substituted by 1 to 5 substituent(s) selected from the above group B,
- (5') heterocyclic group optionally substituted by 1 to 5 substituent(s) selected from the above group B, or
- (6') heterocycle  $C_{1-6}$  alkyl optionally substituted by 1 to 5 substituent(s) selected from the above group B,

(n)

wherein  $R^{a29}$  is as defined above, and  $R^{a25}$  is hydrogen atom, optionally substituted  $C_{1-6}$  alkyl (as defined above),  $C_{6-14}$  aryl optionally substituted by 1 to 5 substituent(s) selected from the above group

B or heterocyclic group optionally substituted by 1 to 5 substituent(s) selected from the above group B,  $\,$ 

(0)

wherein Ra25 is as defined above, and q is 0, 1 or 2,

(p)

wherein  $R^{a26}$  is hydrogen atom, optionally substituted  $C_{1-6}$  alkyl (as defined above),  $C_{6-14}$  aryl optionally substituted by 1 to 5 substituent(s) selected from the above group B or heterocyclic group optionally substituted by 1 to 5 substituent(s) selected from the above group B,

and

(q) heterocyclic group having 1 to 4 heteroatom(s) selected from an oxygen atom, a nitrogen atom and a sulfur atom,

w is an integer of 1 to 3, and Y is

- (1) a single bond,
- (2) C<sub>1-6</sub> alkylene,
- (3) C<sub>2-6</sub> alkenylene,
- (4) -(CH<sub>2</sub>)<sub>m</sub>-O-(CH<sub>2</sub>)<sub>n</sub>-,

(hereinafter m and n are each independently 0 or an integer of 1 to 6),

(5) -CO-, · .\*• . . "• (6)  $-CO_2-(CH_2)_n$ -, 10 (7) -CONH- (CH<sub>2</sub>)<sub>n</sub>-NH-, 15 (8) -NHCO<sub>2</sub>-, 20 (9) -NHCONH-, 25 (10)-O-(CH<sub>2</sub>)<sub>n</sub>-CO-, 30 (11) -O-(CH<sub>2</sub>)<sub>n</sub>-O-, 35 (12)-SO<sub>2</sub>-, 40 (13)-(CH<sub>2</sub>)<sub>m</sub>-NR<sup>a12</sup>-(CH<sub>2</sub>)<sub>n</sub>-45 wherein Ra12 is (1') hydrogen atom, (2') optionally substituted C<sub>1-6</sub> alkyl (as defined above), (3')  $C_{6-14}$  aryl  $C_{1-6}$  alkyl optionally substituted by 1 to 5 substituent(s) selected from the 50 above group B, (4')  $C_{6-14}$  aryl optionally substituted by 1 to 5 substituent(s) selected from the above group B, (5') 55 -CORb5 wherein  $R^{b5}$  is hydrogen atom, optionally substituted  $C_{1-6}$  alkyl (as defined above), .  $C_{6-14}$ 

aryl optionally substituted by 1 to 5 substituent(s) selected from the above group B or  $C_{6-14}$ 

aryl C<sub>1-6</sub> alkyl optionally substituted by 1 to 5 substituent(s) selected from the above group B, 5 -COOR<sup>b5</sup> (Rb5 is as defined above) or (7') 10 -SO<sub>2</sub>R<sup>b5</sup> (Rb5 is as defined above), 15 (14)-NR<sup>a12</sup>CO-20 (Ra12 is as defined above), (15)-CONR<sup>a13</sup>-(CH<sub>2</sub>)<sub>0</sub>-25 wherein  $R^{a13}$  is hydrogen atom, optionally substituted  $C_{1-6}$  alkyl (as defined above) or  $C_{6-14}$  aryl C<sub>1-6</sub> alkyl optionally substituted by 1 to 5 substituent(s) selected from the above group B, (16)30 -CONH-CHR<sup>a14</sup>wherein  $R^{a14}$  is  $C_{6-14}$  aryl optionally substituted by 1 to 5 substituent(s) selected from the above 35 group B, (17)-O-(CH<sub>2</sub>)<sub>m</sub>-CR<sup>a15</sup>R<sup>a16</sup>-(CH<sub>2</sub>)<sub>n</sub>-40 wherein Ra15 and Ra16 are each independently (1') hydrogen atom. (2') carboxyl, 45 (3') C<sub>1-6</sub> alkyl, (4')-OR<sup>b6</sup> 50 wherein  $\rm R^{b6}$  is  $\rm C_{1-6}$  alkyl or  $\rm C_{6-14}$  aryl  $\rm C_{1-6}$  alkyl, or -NHR<sup>b7</sup> 55 wherein  $\mathsf{R}^{\mathsf{b7}}$  is hydrogen atom,  $\mathsf{C}_{\mathsf{1-6}}$  alkyl,  $\mathsf{C}_{\mathsf{1-6}}$  alkanoyl or  $\mathsf{C}_{\mathsf{6-14}}$  aryl  $\mathsf{C}_{\mathsf{1-6}}$  alkyloxycarbonyl,

or Ra15 is optionally

(6')

$$-(CH_2) \frac{1}{n} (Z') w'$$

wherein n', ring B', Z' and w' are the same as the above-mentioned n, ring B, Z and w, respectively, and may be the same as or different from the respective counterparts,

(18)

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( $R^{a12}$  and  $R^{a15}$  are each as defined above), (19)

-NR<sup>a17</sup>SO<sub>2</sub>-

wherein  $R^{a17}$  is hydrogen atom or  $C_{1-6}$  alkyl, (20)

-S(O)<sub>e</sub>-(CH<sub>2</sub>)<sub>m</sub>-CR<sup>a15</sup>R<sup>a16</sup>-(CH<sub>2</sub>)<sub>n</sub>-

(e is 0, 1 or 2,  $$\rm R^{a15}$$  and  $\rm R^{a16}$  are each as defined above), or

(21)

$$\hbox{-(CH$_2$)}_{\rm m}\hbox{-CR}^{{\rm a15}}{\rm R}^{{\rm a16}}\hbox{-(CH$_2$)}_{\rm n}\hbox{-}$$

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(Ra15 and Ra16 are each as defined above),

or a pharmaceutically acceptable salt thereof.

(30) The fused ring compound of (29) above, which is represented by the following formula [II-1]

wherein each symbol is as defined in (29), or a pharmaceutically acceptable salt thereof.

(31) The fused ring compound of (29) above, which is represented by the following formula [II-2]

$$R^2$$
 $R^3$ 
 $R^4$ 
 $R^5$ 
 $R^5$ 
 $R^6$ 
 $R^5$ 
 $R^6$ 
 $R^6$ 
 $R^6$ 
 $R^6$ 
 $R^6$ 

wherein each symbol is as defined in (29), or a pharmaceutically acceptable salt thereof.

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(32) The fused ring compound of (29) above, which is represented by the following formula [II-3]

wherein each symbol is as defined in (29), or a pharmaceutically acceptable salt thereof.

(33) The fused ring compound of (29) above, which is represented by the following formula [II-4]

$$R^2$$
 $N$ 
 $N$ 
 $R^{5'}$ 
 $R^{5'}$ 
 $R^{5'}$ 
 $R^{5'}$ 
 $R^{5'}$ 
 $R^{5'}$ 
 $R^{5'}$ 

wherein each symbol is as defined in (29), or a pharmaceutically acceptable salt thereof. (34) The fused ring compound of any of (29) to (33) above, wherein at least one of  $R^1$ ,  $R^2$ ,  $R^3$  and  $R^4$  is carboxyl, -COOR<sup>a1</sup>, -CONR<sup>a2</sup>Ra3, -SO<sub>2</sub>Ra7 (wherein  $R^{a1}$ ,  $R^{a2}$ ,  $R^{a3}$  and  $R^{a7}$  are as defined in (29)),

or a pharmaceutically acceptable salt thereof.

(35) The fused ring compound of (34) above, wherein at least one of R1, R2, R3 and R4 is carboxyl, -COORa1 or

- -SO<sub>2</sub>Ra7 wherein Ra1 and Ra7 are as defined in (29), or a pharmaceutically acceptable salt thereof.
- (36) The fused ring compound of (35) above, wherein at least one of R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup> and R<sup>4</sup> is carboxyl or -COOR<sup>a1</sup> wherein R<sup>a1</sup> is as defined in (29), or a pharmaceutically acceptable salt thereof.
- (37) The fused ring compound of (36) above, wherein R<sup>2</sup> is carboxyl and R<sup>1</sup>, R<sup>3</sup> and R<sup>4</sup> are hydrogen atoms, or a pharmaceutically acceptable salt thereof.
- (38) The fused ring compound of any of (29) to (33) above, wherein at least one of R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup> and R<sup>4</sup> is -COOR<sup>a1</sup> wherein R<sup>a1</sup> is glucuronic acid residue, or a pharmaceutically acceptable salt thereof.
- (39) The fused ring compound of any of (29) to (33) above, wherein at least one of R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup> and R<sup>4</sup> is heterocyclic group having 1 to 4 heteroatom(s) selected from an oxygen atom, a nitrogen atom and a sulfur atom, or a pharmaceutically acceptable salt thereof.
- (40) The fused ring compound of any of (29) to (39) above, wherein the ring Cy' is cyclopentyl, cyclohexyl, cycloheptyl or tetrahydrothiopyranyl, or a pharmaceutically acceptable salt thereof.
- (41) The fused ring compound of (40) above, wherein the ring Cy' is cyclopentyl, cyclohexyl or cycloheptyl, or a pharmaceutically acceptable salt thereof.
- (42) The fused ring compound of any of (29) to (39) above, wherein the ring Cy' is



- wherein each symbol is as defined in (29), or a pharmaceutically acceptable salt thereof.
  - (43) The fused ring compound of any of (29) to (42) above, wherein the ring A' is phenyl, pyridyl, pyrazinyl, pyrimidinyl or pyridazinyl, or a pharmaceutically acceptable salt thereof.
  - (44) The fused ring compound of (43) above, wherein the ring A' is phenyl or pyridyl, or. a pharmaceutically acceptable salt thereof.
  - (45) The fused ring compound of (44) above, wherein the ring A' is phenyl, or a pharmaceutically acceptable salt thereof.
    - (46) The fused ring compound of any of (29) to (45) above, wherein at least one substituent optionally substituted by group A is a substituent substituted by  $C_{1-6}$  alkoxy  $C_{1-6}$  alkoxy, or a pharmaceutically acceptable salt thereof.
    - (47) The fused ring compound of any of (29) to (46) above, wherein the Y is  $-(CH_2)_m$ -O- $-(CH_2)_n$ -,  $-NHCO_2$ -,  $-CONH-CHR^{a14}$ -,  $-(CH_2)_m$ -NR<sup>a12</sup>- $-(CH_2)_n$ -,  $-CONR^{a13}$ - $-(CH_2)_n$ -,  $-O-(CH_2)_m$ -CR<sup>a15</sup>R<sup>a16</sup>- $-(CH_2)_n$  or  $-(CH_2)_m$ -CR<sup>a16</sup>- $-(CH_2)_m$  or  $-(CH_2)_m$ -CR<sup>a17</sup>- $-(CH_2)_m$ -CR<sup>a18</sup>- $-(CH_2)_n$  or  $-(CH_2)_m$ -CR<sup>a18</sup>- $-(CH_2)_m$  or  $-(CH_2)_m$ -CR<sup>a18</sup>- $-(CH_2)_m$  or  $-(CH_2)_m$ -CR<sup>a19</sup>- $-(CH_2)_m$ -CR<sup>a19</sup>- $-(CH_2)_m$  or  $-(CH_2)_m$ -CR<sup>a19</sup>- $-(CH_2)_m$ -CR<sup>a19</sup>- $-(CH_2)_m$ -CR<sup>a19</sup>- $-(CH_2)_m$  or  $-(CH_2)_m$ -CR<sup>a19</sup>- $-(CH_2)_$
    - (CH<sub>2</sub>)<sub>n</sub>-NR<sup>a12</sup>-CHR<sup>a15</sup>- (wherein each symbol is as defined in (29)), or a pharmaceutically acceptable salt thereof. (48) The fused ring compound of (47) above, wherein the Y is -(CH<sub>2</sub>)<sub>m</sub>-O-(CH<sub>2</sub>)<sub>n</sub>-or -O-(CH<sub>2</sub>)<sub>m</sub>-CR<sup>a15</sup>Ra<sup>16</sup>-(CH<sub>2</sub>)<sub>n</sub>- (wherein each symbol is as defined in (29)), or a pharmaceutically acceptable salt thereof.
    - (49) The fused ring compound of (48) above, wherein the Y is (CH<sub>2</sub>)<sub>m</sub>-O-(CH<sub>2</sub>)<sub>n</sub>- wherein each symbol is as defined in (29), or a pharmaceutically acceptable salt thereof.
    - (50) The fused ring compound of any of (29) to (46) above, wherein the Y is  $-(CH_2)_m$ - $CR^{a15}R^{a16}$ - $(CH_2)_n$  (wherein each symbol is as defined in (29)), or a pharmaceutically acceptable salt thereof.
    - (51) The fused ring compound of any of (29) to (50) above, wherein the R<sup>2</sup> is carboxyl, R<sup>1</sup>, R<sup>3</sup> and R<sup>4</sup> are hydrogen atoms, the ring Cy' is cyclopentyl, cyclohexyl or cycloheptyl, and the ring A' is phenyl, or a pharmaceutically acceptable salt thereof.
    - (52) The fused ring compound of any of (29) to (51) above, wherein at least one group represented by Z is heterocycle C<sub>1-6</sub> alkyl optionally substituted by 1 to 5 substituent(s) selected from the group D, or a pharmaceutically acceptable salt thereof.
  - (53) The fused ring compound of any of (29) to (51) above, wherein at least one group represented by Z is heterocyclic group optionally substituted by 1 to 5 substituent(s) selected from the group D, wherein said heterocyclic group is selected from the following groups:

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wherein  $E^1$  is an oxygen atom, a sulfur atom or N(-R<sup>a35</sup>),  $E^2$  is an oxygen atom,  $CH_2$  or N(-R<sup>a35</sup>),  $E^3$  is an oxygen atom or a sulfur atom, wherein each R<sup>a35</sup> is independently hydrogen atom or  $C_{1-6}$  alkyl, f is an integer of 1 to 3, and h and h' are the same or different and each is an integer of 1 to 3, or a pharmaceutically acceptable salt thereof. (54) The fused ring compound of (53) above, wherein at least one group represented by Z is heterocyclic group

optionally substituted by 1 to 5 substituent(s) selected from the group D, wherein said heterocyclic group is selected from the following groups:

wherein each symbol is as defined in (53), or a pharmaceutically acceptable salt thereof.

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- (55) The fused ring compound of any of (29) to (51) above, wherein at least one group represented by group D is  $-(CH_2)_t$ -CONR<sup>a27</sup>Ra<sup>28</sup> wherein each symbol is as defined in (29), and at least one of R<sup>a27</sup> and R<sup>a28</sup> is C<sub>1-6</sub> alkoxy, or a pharmaceutically acceptable salt thereof.
- (56) The fused ring compound of any of (29) to (51) above, wherein at least one group represented by group D is  $-(CH_2)_t-C(=NR^{a33})NH_2$  wherein each symbol is as defined in (29), and  $R^{a33}$  is hydroxyl group or  $C_{1-6}$  alkoxy, or a pharmaceutically acceptable salt thereof.
- (57) The fused ring compound of any of (29) to (51) above, wherein at least one group represented by group D is  $-(CH_2)_t$ -O- $(CH_2)_p$ -COR<sup>a21</sup> wherein each symbol is as defined in (29), and R<sup>a21</sup> is amino, or a pharmaceutically acceptable salt thereof.
- (58) The fused ring compound of any of (29) to (51) above, wherein at least one group represented by group D is  $-(CH_2)_1-NR^{a29}CO-R^{a24}$  wherein each symbol is as defined in (29), and  $R^{a24}$  is amino or  $C_{1-6}$  alkylamino, or a pharmaceutically acceptable salt thereof.
- (59) The fused ring compound of any of (29) to (51) above, wherein at least one group represented by group D is -(CH<sub>2</sub>)<sub>1</sub>-NR<sup>a22</sup>R<sup>a23</sup> wherein each symbol is as defined in (29), and at least one of R<sup>a22</sup> and R<sup>a23</sup> is amino or C<sub>1-6</sub> alkylamino, or a pharmaceutically acceptable salt thereof.
  - (60) The fused ring compound of any of (29) to (51) above, wherein at least one group represented by group D is heterocyclic group having 1 to 4 heteroatom(s) selected from an oxygen atom, a nitrogen atom and a sulfur atom, or a pharmaceutically acceptable salt thereof.
  - (61) The fused ring compound of the formula [I] or a pharmaceutically acceptable salt thereof, which is selected from the group consisting of
  - ethyl 2-[4-(3-bromophenoxy)phenyl]-1-cyclohexylbenzimidazole-5-carboxylate (Example 1),
  - 2-[4-(3-bromophenoxy)phenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 2),
- 35 ethyl 1-cyclohexyl-2-(4-hydroxyphenyl)benzimidazole-5-carboxylate (Example 3),
  - ethyl 2-[4-(2-bromo-5-chlorobenzyloxy)phenyl]-1-cyclohexylbenzimidazole-5-carboxylate (Example 4),
  - ethyl 2-{4-[2-(4-chlorophenyl)-5-chlorobenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylate (Example 5),
  - $\hbox{2-} \{4-[2-(4-chlorophenyl)-5-chlorobenzyloxy] phenyl\}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 6),$
  - ethyl 2-[4-(2-bromo-5-methoxybenzyloxy)phenyl]-1-cyclohexylbenzimidazole-5-carboxylate (Example 7),
  - ethyl 2-{4-[2-(4-chlorophenyl)-5-methoxybenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylate (Example 8),
    - 2-{4-[2-(4-chlorophenyl)-5-methoxybenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 9), ethyl 1-cyclohexyl-2-{4-[(E)-2-phenylvinyl]phenyl}benzimidazole-5-carboxylate (Example 10),
    - 1-cyclohexyl-2-{4-[(E)-2-phenylvinyl]phenyl}benzimidazole-5-carboxylic acid (Example 11),
  - 2-(4-benzyloxyphenyl)-1-cyclopentylbenzimidazole-5-carboxylic acid (Example 12),
    - 2-(4-benzyloxyphenyl)-1-cyclopentylbenzimidazole-5-carboxamide (Example 13),
    - 2-(4-benzyloxyphenyl)-5-cyano-1-cyclopentylbenzimidazole (Example 14),
    - 2-(4-benzyloxyphenyl)-1-cyclopentylbenzimidazole-5-carboxamide oxime (Example 15),
    - ethyl 1-cyclohexyl-2-{4-[{4-(4-fluorophenyl)-2-methyl-5-thiazolyl}methoxy]phenyl}benzimidazole-5-carboxylate (Example 16),
    - 1-cyclohexyl-2-{4-[{4-(4-fluorophenyl)-2-methyl-5-thiazolyl}methoxy]phenyl}benzimidazole-5-carboxylic acid (Example 17),
    - ethyl 1-cyclohexyl-2-(2-fluoro-4-hydroxyphenyl)benzimidazole-5-carboxylate (Example 18),
    - ethyl 2-{4-[bis(3-fluorophenyl)methoxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylate (Example 19),
- 2-{4-[bis(3-fluorophenyl)methoxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 20),
  - ethyl 1-cyclopentyl-2-(4-nitrophenyl)benzimidazole-5-carboxylate (Example 21),
  - ethyl 2-(4-aminophenyl)-1-cyclopentylbenzimidazole-5-carboxylate (Example 22),
  - ethyl 2-(4-benzoylaminophenyl)-1-cyclopentylbenzimidazole-5-carboxylate (Example 23),

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2-(4-benzoylaminophenyl)-1-cyclopentylbenzimidazole-5-carboxylic acid (Example 24),
            ethyl 2-{4-[3-(3-chlorophenyl)phenoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylate (Example 25),
            2-{4-[3-(3-chlorophenyl)phenoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 26),
            ethyl 2-[4-(3-acetoxyphenyloxy)phenyl]-1-cyclohexylbenzimidazole-5-carboxylate (Example 27),
            ethyl 1-cyclohexyl-2-[4-(3-hydroxyphenyloxy)phenyl]benzimidazole-5-carboxylate (Example 28),
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            ethyl 1-cyclohexyl-2-{4-[3-(4-pyridylmethoxy)phenyloxy]phenyl}benzimidazole-5-carboxylate (Example 29),
            1-cyclohexyl-2-{4-[3-(4-pyridylmethoxy)phenyloxy]phenyl}benzimidazole-5-carboxylic acid (Example 30),
           2-(4-benzyloxyphenyl)-1-cyclopentylbenzimidazole (Example 31), ethyl 2-(4-benzyloxyphenyl)-1-cyclopentylben-
            zimidazole-5-carboxylate (Example 32),
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            2-(4-benzyloxyphenyl)-1-cyclopentyl-N,N-dimethylbenzimidazole-5-carboxamide (Example 33),
           2-(4-benzyloxyphenyl)-1-cyclopentyl-N-methoxy-N-methylbenzimidazole-5-carboxamide (Example 34),
           2-(4-benzyloxyphenyl)-1-cyclopentyl-5-(1-hydroxy-1-methylethyl)benzimidazole (Example 35),
           5-acetyl-2-(4-benzyloxyphenyl)-1-cyclopentylbenzimidazole (Example 36),
           2-(4-benzyloxyphenyl)-1-cyclopentyl-N-(2-dimethylaminoethyl)benzimidazole-5-carboxamide
                                                                                                         dihydrochloride
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           (Example 37),
           2-(4-benzyloxyphenyl)-1-cyclopentyl-5-nitrobenzimidazole (Example 38),
           5-amino-2-(4-benzyloxyphenyl)-1-cyclopentylbenzimidazole hydrochloride (Example 39),
           5-acetylamino-2-(4-benzyloxyphenyl)-1-cyclopentylbenzimidazole (Example 40),
           2-(4-benzyloxyphenyl)-1-cyclopentyl-5-methanesulfonylaminobenzimidazole (Example 41),
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           5-sulfamoyl-2-(4-benzyloxyphenyl)-1-cyclopentylbenzimidazole (Example 42),
           2-[4-(4-tert-butylbenzyloxy)phenyl]-1-cyclopentylbenzimidazole-5-carboxylic acid (Example 43),
           2-[4-(4-carboxybenzyloxy)phenyl]-1-cyclopentylbenzimidazole-5-carboxylic acid (Example 44),
           2-[4-(4-chlorobenzyloxy)phenyl]-1-cyclopentylbenzimidazole-5-carboxylic acid (Example 45),
           2-[4-[(2-chloro-5-thienyl)methoxy]phenyl}-1-cyclopentylbenzimidazole-5-carboxylic acid (Example 46),
           1-cyclopentyl-2-[4-(4-trifluoromethylbenzyloxy)phenyl]benzimidazole-5-carboxylic acid (Example 47),
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           1-cyclopentyl-2-[4-(4-methoxybenzyloxy)phenyl]benzimidazole-5-carboxylic acid (Example 48),
           1-cyclopentyl-2-[4-(4-pyridylmethoxy)phenyl]benzimidazole-5-carboxylic acid hydrochloride (Example 49),
           1-cyclopentyl-2-[4-(4-methylbenzyloxy)phenyl]benzimidazole-5-carboxylic acid (Example 50),
           1-cyclopentyl-2-{4-[(3,5-dimethyl-4-isoxazolyl)methoxy]phenyl}benzimidazole-5-carboxylic acid (Example 51),
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           1-cyclopentyl-2-(4-hydroxyphenyl)benzimidazole-5-carboxylic acid (Example 52),
           [2-(4-benzyloxyphenyl)-1-cyclopentylbenzimidazol-5-yl]carbonylaminoacetic acid (Example 53),
           2-[4-(2-chlorobenzyloxy)phenyl]-1-cyclopentylbenzimidazole-5-carboxylic acid (Example 54),
           2-[4-(3-chlorobenzyloxy)phenyl]-1-cyclopentylbenzimidazole-5-carboxylic acid (Example 55),
           2-(4-benzyloxyphenyl)-3-cyclopentylbenzimidazole-5-carboxylic acid (Example 56),
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          2-[4-(benzenesulfonylamino)phenyl]-1-cyclopentylbenzimidazole-5-carboxylic acid (Example 57),
          1-cyclopentyl-2-[4-(3,5-dichlorophenylcarbonylamino)phenyl]benzimidazole-5-carboxylic acid (Example 58),
          2-{4-[(4-chlorophenyl)carbonylamino]phenyl}-1-cyclopentylbenzimidazole-5-carboxylic acid (Example 59),
          2-{4-[(4-tert-butylphenyl)carbonylamino]phenyl}-1-cyclopentylbenzimidazole-5-carboxylic acid (Example 60),
          2-{4-[(4-benzyloxyphenyl)carbonylamino]phenyl}-1-cyclopentylbenzimidazole-5-carboxylic acid (Example 61),
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          trans-4-[2-(4-benzyloxyphenyl)-5-carboxybenzimidazol-1-yl]cyclohexan-1-ol (Example 62),
          trans-1-[2-(4-benzyloxyphenyl)-5-carboxybenzimidazol-1-yl]-4-methoxycyclohexane (Example 63),
          2-(4-benzyloxyphenyl)-5-carboxymethyl-1-cyclopentylbenzimidazole (Example 64),
          2-[1-benzyloxycarbonyl-4-piperidyl]-1-cyclopentylbenzimidazole-5-carboxylic acid (Example 65),
          2-[(4-cyclohexylphenyl)carbonylamino]-1-cyclopentylbenzimidazole-5-carboxylic acid (Example 66),
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          1-cyclopentyl-2-[4-(3,5-dichlorobenzyloxy)phenyl]benzimidazole-5-carboxylic acid (Example 67),
          1-cyclopentyl-2-[4-(3,4-dichlorobenzyloxy)phenyl]benzimidazole-5-carboxylic acid (Example 68),
          1-cyclopentyl-2-[4-(phenylcarbamoylamino)phenyl]benzimidazole-5-carboxylic acid (Example 69),
          1-cyclopentyl-2-[4-(diphenylmethoxy)phenyl]benzimidazole-5-carboxylic acid (Example 70),
          1-cyclopentyl-2-(4-phenethyloxyphenyl)benzimidazole-5-carboxylic acid (Example 71),
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          trans-1-[2-(4-benzyloxyphenyl)-5-carboxybenzimidazol-1-yl]-4-tert-butylcyclohexane (Example 72),
          2-(4-benzyloxyphenyl)-5-carboxymethoxy-1-cyclopentylbenzimidazole (Example 73),
          2-(4-benzylaminophenyl)-1-cyclopentylbenzimidazole-5-carboxylic acid (Example 74),
         2-[4-(N-benzenesulfonyl-N-methylamino)phenyl]-1-cyclopentylbenzimidazole-5-carboxylic acid (Example 75),
         2-[4-(N-benzyl-N-methylamino)phenyl]-1-cyclopentylbenzimidazole-5-carboxylic acid (Example 76),
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          1-cyclohexyl-2-(4-phenethylphenyl)benzimidazole-5-carboxylic acid (Example 77),
          2-(1-benzyl-4-piperidyl)-1-cyclopentylbenzimidazole-5-carboxylic acid (Example 78),
          2-(1-benzoyl-4-piperidyl)-1-cyclopentylbenzimidazole-5-carboxylic acid (Example 79),
         1-cyclopentyl-2-[1-(p-toluenesulfonyl)-4-piperidyl]benzimidazole-5-carboxylic acid (Example 80),
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1-cyclohexyl-2-[4-(3,5-dichlorobenzyloxy)phenyl]benzimidazole-5-carboxylic acid (Example 81),
          1-cyclohexyl-2-[4-(diphenylmethoxy)phenyl]benzimidazole-5-carboxylic acid (Example 82),
          1-cyclohexyl-2-[4-(3,5-di-tert-butylbenzyloxy)phenyl]benzimidazole-5-carboxylic acid (Example 83),
          2-(4-benzyloxyphenyl)-1-(4-methylcyclohexyl)benzimidazole-5-carboxylic acid (Example 84).
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          1-cyclohexyl-2-(4-[2-(2-naphthyl)ethoxy]phenyl}benzimidazole-5-carboxylic acid (Example 85),
          1-cyclohexyl-2-[4-(1-naphthyl)methoxyphenyl]benzimidazole-5-carboxylic acid (Example 86),
          1-cyclohexyl-2-[4-(dibenzylamino)phenyl]benzimidazole-5-carboxylic acid (Example 87),
          2-[4-(2-biphenylylmethoxy)phenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 88),
          2-(4-benzyloxyphenyl)-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 89),
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          1-cyclohexyl-2-[4-(dibenzylmethoxy)phenyl]benzimidazole-5-carboxylic acid (Example 90),
          2-(4-benzoylmethoxyphenyl)-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 91),
          2-(4-benzyl-1-piperazinyl)-1-cyclohexylbenzimidazole-5-carboxylic acid dihydrochloride (Example 92),
          1-cyclohexyl-2-[4-(3,3-diphenylpropyloxy)phenyl]benzimidazole-5-carboxylic acid (Example 93),
          2-[4-(3-chloro-6-phenylbenzyloxy)phenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 94),
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          2-(4-benzyloxypiperidino)-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 95),
          1-cyclohexyl-2-{4-[2-(phenoxy)ethoxy]phenyl}benzimidazole-5-carboxylic acid (Example 96),
          1-cyclohexyl-2-[4-(3-phenylpropyloxy)phenyl]benzimidazole-5-carboxylic acid (Example 97),
          1-cyclohexyl-2-[4-(5-phenylpentyloxy)phenyl]benzimidazole-5-carboxylic acid (Example 98),
          2-(3-benzyloxy-5-isoxazolyl)-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 99),
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          2-(2-benzyloxy-5-pyridyl)-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 100),
          1-cyclohexyl-2-{4-[2-(3,4,5-trimethoxyphenyl)ethoxy]phenyl}benzimidazole-5-carboxylic acid (Example 101),
          2-(4-benzyloxyphenyl)-1-(4,4-dimethylcyclohexyl)benzimidazole-5-carboxylic acid (Example 102),
          1-cyclohexyl-2-{4-[2-(1-naphthyl)ethoxy]phenyl}benzimidazole-5-carboxylic acid (Example 103),
          2-[4-(2-benzyloxyphenoxy)phenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 104),
          2-[4-(3-benzyloxyphenoxy)phenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 105),
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          1-cyclohexyl-2-f4-(2-hydroxyphenoxy)phenylbenzimidazole-5-carboxylic acid (Example 106).
          1-cyclohexyl-2-[4-(3-hydroxyphenoxy)phenyl]benzimidazole-5-carboxylic acid (Example 107),
          1-cyclohexyl-2-[4-(2-methoxyphenoxy)phenyl]benzimidazole-5-carboxylic acid (Example 108),
          1-cyclohexyl-2-[4-(3-methoxyphenoxy)phenyl]benzimidazole-5-carboxylic acid (Example 109),
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          1-cyclohexyl-2-[4-(2-propoxyphenoxy)phenyl]benzimidazole-5-carboxylic acid (Example 110),
          1-cyclohexyl-2-[4-(3-propoxyphenoxy)phenyl]benzimidazole-5-carboxylic acid (Example 111),
          1-cyclohexyl-2-{4-[2-(3-methyl-2-butenyloxy)phenoxy]phenyl}benzimidazole-5-carboxylic acid (Example 112),
          1-cyclohexyl-2-{4-[3-(3-methyl-2-butenyloxy)phenoxy]phenyl}benzimidazole-5-carboxylic acid (Example 113),
          1-cyclohexyl-2-[4-(2-isopentyloxyphenoxy)phenyl]benzimidazole-5-carboxylic acid (Example 114),
35
          1-cyclohexyl-2-[4-(3-isopentyloxyphenoxy)phenyl]benzimidazole-5-carboxylic acid (Example 115),
          1-cyclohexyl-2-{4-[2-(10,11-dihydro-5H-dibenzo[b,f]azepin-5-yl)ethoxy]phenyl}benzimidazole-5-carboxylic
                                                                                                                  acid
          (Example 116),
          1-cyclohexyl-2-{4-[2-(4-trifluoromethylphenyl)benzyloxy]phenyl}benzimidazole-5-carboxylic acid (Example 117),
          2-{4-[bis(4-chlorophenyl)methoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 118),
          1-cyclohexyl-2-(4-[2-(4-methoxyphenyl)ethoxy]phenyl}benzimidazole-5-carboxylic acid (Example 119),
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          1-cyclohexyl-2-(4-[2-(2-methoxyphenyl)ethoxy]phenyl}benzimidazole-5-carboxylic acid (Example 120),
          1-cyclohexyl-2-{4-[2-(3-methoxyphenyl)ethoxy]phenyl}benzimidazole-5-carboxylic acid (Example 121), 2-(4-ben-
          zyloxyphenyl)-1-cycloheptylbenzimidazole-5-carboxylic acid (Example 122),
          1-cyclohexyl-2-[4-(2-phenethyloxyphenoxy)phenyl]benzimidazole-5-carboxylic acid (Example 123),
45
          1-cyclohexyl-2-[4-(3-phenethyloxyphenoxy)phenyl]benzimidazole-5-carboxylic acid (Example 124),
          1-cyclohexyl-2-[4-(2,2-diphenylethoxy)phenyl]benzimidazole-5-carboxylic acid (Example 125),
          2-(4-benzyloxyphenyl)-1-(3-cyclohexenyl)benzimidazole-5-carboxylic acid (Example 126),
          cis-1-[2-(4-benzyloxyphenyl)-5-carboxybenzimidazol-1-yl]-4-fluorocyclohexane (Example 127),
          1-cyclohexyl-2-[4-(2-phenoxyphenoxy)phenyl]benzimidazole-5-carboxylic acid (Example 128),
          1-cyclohexyl-2-[4-(3-phenoxyphenoxy)phenyl]benzimidazole-5-carboxylic acid (Example 129),
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          2-{4-[(2R)-2-benzyloxycarbonylamino-2-phenylethoxy)phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Ex-
          ample 130),
          1-cyclohexyl-2-{2-fluoro-4-[2-(4-trifluoromethylphenyl)benzyloxy]phenyl}benzimidazole-5-carboxylic acid (Exam-
          ple 131),
55
          2-[4-(4-benzyloxyphenoxy)phenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 132),
          2-{4-[bis(4-methylphenyl)methoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 133),
          2-{4-[bis(4-fluorophenyl)methoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 134),
          1-cyclohexyl-6-methoxy-2-[4-(3-phenylpropoxy)phenyl]benzimidazole-5-carboxylic acid (Example 135),
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1-cyclohexyl-6-hydroxy-2-[4-(3-phenylpropoxy)phenyl]benzimidazole-5-carboxylic acid (Example 136),
            1-cyclohexyl-6-methyl-2-[4-(3-phenylpropoxy)phenyl]benzimidazole-5-carboxylic acid (Example 137),
           2-{4-[2-(2-benzyloxyphenyl)ethoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 138),
           2-{4-[2-(3-benzyloxyphenyl)ethoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 139),
           2-[4-(2-carboxymethyloxyphenoxy)phenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 140),
  5
           2-[4-(3-carboxymethyloxyphenoxy)phenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 141),
           2-{4-[3-chloro-6-(4-methylphenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 142),
           2-{4-[3-chloro-6-(4-methoxyphenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example
           143).
           1-cyclohexyl-2-{2-methyl-4-[2-(4-trifluoromethylphenyl)benzyloxy]phenyl}benzimidazole-5-carboxylic acid (Ex-
  10
           ample 144).
           2-{4-[2-(4-tert-butylphenyl)-5-chlorobenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example
           145),
           2-{4-(3-chloro-6-phenylbenzyloxy)-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 146),
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           2-{4-[3-chloro-6-(3,5-dichlorophenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example
           147),
           2-{4-[bis(4-fluorophenyl)methoxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 148),
           2-{4-(4-benzyloxyphenoxy)-2-chlorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 149),
           2-{4-(4-benzyloxyphenoxy)-2-trifluoromethylphenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 150),
           2-{4-[3-chloro-6-(2-trifluoromethylphenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Exam-
 20
           ple 151),
           2-{4-[(2R)-2-amino-2-phenylethoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 152),
           2-[4-(2-biphenylyloxy)phenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 153),
           2-[4-(3-biphenylyloxy)phenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 154),
           2-{4-[2-{(1-tert-butoxycarbonyl-4-piperidyl)methoxy}phenoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic
 25
           acid (Example 155),
          2-{4-[3-{(1-tert-butoxycarbonyl-4-piperidyl)methoxy}phenoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic
           acid (Example 156),
          30
          ple 157).
          2-{4-[2-(2-biphenylyl)ethoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 158),
          2-[4-(2-biphenylylmethoxy)phenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 159),
          1-cyclohexyl-2-{4-[2-(4-piperidylmethoxy)phenoxy]phenyl}benzimidazole-5-carboxylic acid hydrochloride (Exam-
          ple 160),
35
          1-cyclohexyl-2-{4-[3-(4-piperidylmethoxy)phenoxy]phenyl}benzimidazole-5-carboxylic acid hydrochloride (Exam-
          ple 161),
          2-{4-[(2R)-2-acetylamino-2-phenylethoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 162),
          1-cyclohexyl-2-{4-[3-(4-methyl-3-pentenyloxy)phenoxy]phenyl}benzimidazole-5-carboxylic acid (Example 163),
          1-cyclohexyl-2-{4-[3-(3-methyl-3-butenyloxy)phenoxy]phenyl}benzimidazole-5-carboxylic acid (Example 164),
          2-{4-[{(2S)-1-benzyl-2-pyrrolidinyl}methoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride
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          (Example 165).
          2-{4-[3-chloro-6-(4-methylthiophenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example
          166).
         2-{4-[3-chloro-6-(4-methanesulfonylphenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Ex-
45
          ample 167),
         2-{4-[3-chloro-6-(2-thienyl)benzyloxylphenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 168),
         2-{4-[3-chloro-6-(3-chlorophenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 169),
         2-{4-[3-chloro-6-(3-pyridyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 170),
         2-{4-[3-chloro-6-(4-fluorophenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 171),
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         2-[4-(4-benzyloxyphenoxy)-3-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 172),
         2-[4-(2-bromo-5-chlorobenzyloxy)phenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 173),
         2-{4-[3-chloro-6-(4-chlorophenyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Exam-
         ple 174),
         2-{4-[2-{(1-acetyl-4-piperidyl)methoxy}phenoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example
55
         175).
         2-{4-[3-{(1-acetyl-4-piperidyl)methoxy}phenoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example
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1-cyclohexyl-2-{4-[3-(2-propynyloxy)phenoxy]phenyl}benzimidazole-5-carboxylic acid (Example 177),

1-cyclohexyl-2-{4-[3-(3-pyridylmethoxy)phenoxy]phenyl}benzimidazole-5-carboxylic acid 178). 2-(4-benzyloxy-2-methoxyphenyl)-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 179). 2-[4-(2-bromo-5-methoxybenzyloxy)phenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 180), 2-[4-(carboxydiphenylmethoxy)phenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 181), 2-{4-[2-(4-chlorophenyl)-5-nitrobenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 182). 5 2-{4-[3-acetylamino-6-(4-chlorophenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 183), 2-{4-[2-(4-carboxyphenyl)-5-chlorobenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 184), 10 2-{4-[{(2S)}-1-benzyloxycarbonyl-2-pyrrolidinyl}methoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 185), 2-{2-chloro-4-[2-(4-trifluoromethylphenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 186). 1-cyclohexyl-2-{4-[3-(2-pyridylmethoxy)phenoxy]phenyl}benzimidazole-5-carboxylic acid (Example 187), 15 2-{4-[2-(4-chlorophenyl)-5-fluorobenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 188), 2-{4-[3-carboxy-6-(4-chlorophenyl)benzyloxylphenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 189), 2-{4-[3-carbamoyl-6-(4-chlorophenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 190), 20 1-cyclohexyl-2-{4-[2-(dimethylcarbamoylmethoxy)phenoxy]phenyl}benzimidazole-5-carboxylic acid (Example 1-cyclohexyl-2-{4-[2-(piperidinocarbonylmethoxy)phenoxy]phenyl}benzimidazole-5-carboxylic acid (Example 2-{4-[{(2S)-1-benzenesulfonyl-2-pyrrolidinyl}methoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Ex-25 ample 193). 2-{4-[{(2S)-1-benzoyl-2-pyrrolidinyl}methoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 2-{4-[2-(4-carbamovlphenyl)-5-chlorobenzyloxylphenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 30 1-cyclohexyl-2-{4-[3-(dimethylcarbamoylmethoxy)phenoxy]phenyl}benzimidazole-5-carboxylic acid (Example 1-cyclohexyl-2-{4-[3-(piperidinocarbonylmethoxy)phenoxy]phenyl}benzimidazole-5-carboxylic acid (Example 197), 1-cyclohexyl-2-{4-[3-{(1-methanesulfonyl-4-piperidyl)methoxy}phenoxy]phenyl}benzimidazole-5-carboxylic acid 35 (Example 198), 1-cyclohexyl-2-{4-[{2-methyl-5-(4-chlorophenyl)-4-oxazolyl}methoxy]phenyl}benzimidazole-5-carboxylic acid (Example 199), 2-{4-[3-(3-chlorobenzyloxy)phenoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 200), 2-{4-[3-(4-chlorobenzyloxy)phenoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 201), 40 1-cyclohexyl-2-{4-[3-(4-fluorobenzyloxy)phenoxy]phenyl}benzimidazole-5-carboxylic acid (Example 202), 1-cyclohexyl-2-{4-{{(2S)-1-(4-nitrophenyl)-2-pyrrolidinyl}methoxy]phenyl}benzimidazole-5-carboxylic acid (Example 203). 1-cyclohexyl-2-{4-[{(2S)-1-phenyl-2-pyrrolidinyl}methoxy]phenyl}benzimidazole-5-carboxylic acid hydrochloride (Example 204). 45 2-{4-[{(2S)-1-(4-acetylaminophenyl)-2-pyrrolidinyl}methoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 205). 2-(4-[{5-(4-chlorophenyl)-2-methyl-4-thiazolyl}methoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 206). 2-{4-[bis(3-fluorophenyl)methoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 207), 50 1-cyclohexyl-2-(4-[2-(4-chlorophenyl)-3-nitrobenzyloxy]phenyl}benzimidazole-5-carboxylic acid (Example 208), 1-cyclohexyl-2-{4-[3-(4-tetrahydropyranyloxy)phenoxy]phenyl}benzimidazole-5-carboxylic acid (Example 209), 1-cyclohexyl-2-{4-[3-(4-trifluoromethylbenzyloxy)phenoxy]phenyl}benzimidazole-5-carboxylic acid (Example 210), 1-cyclohexyl-2-{4-[3-{(1-methyl-4-piperidyl)methoxy}phenoxy]phenyl}benzimidazole-5-carboxylic acid (Example 55 2-{4-[3-(4-tert-butylbenzyloxy)phenoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 212), 2-{4-[3-(2-chlorobenzyloxy)phenoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 213),

1-cyclohexyl-2-(4-[3-(3-pyridyl)phenoxy]phenyl}benzimidazole-5-carboxylic acid (Example 214),

- 2-{4-[3-(4-chlorophenyl)phenoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 215), 1-cyclohexyl-2-{4-[3-(4-methoxyphenyl)phenoxy]phenyl}benzimidazole-5-carboxylic acid (Example 216), 1-cyclohexyl-2-{4-[4-(4-methanesulfonylphenyl)-2-methyl-5-thiazolyl}methoxy]phenyl}benzimidazole-5-carboxylic acid (Example 217),
- 2-{4-[{4-(4-chlorophenyl)-2-methyl-5-thiazolyl}methoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 218),
  - 2-{4-[1-(4-chlorobenzyl)-3-piperidyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 219), 1-cyclohexyl-2-{4-[3-{(2-methyl-4-thiazolyl)methoxy}phenoxy]phenyl}benzimidazole-5-carboxylic acid (Example 220),
- 1-cyclohexyl-2-{4-[3-{(2,4-dimethyl-5-thiazolyl)methoxy}phenoxy]phenyl}benzimidazole-5-carboxylic acid (Example 221),
  - 1-cyclohexyl-2-{4-[3-(3,5-dichlorophenyl)phenoxy]phenyl}benzimidazole-5-carboxylic acid (Example 222),
  - 2-{4-[1-(4-chlorobenzyl)-4-piperidyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 223),
  - 2-{4-[3-(4-chlorobenzyloxy)piperidino]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 224), 2-{4-[4-carbamoyl-2-(4-chlorophenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example
- 225),
  2-{4-[4-(4-chlorobenzyloxy)piperidino]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 226),
  2-{4-[3-{(2-chloro-4-pyridyl)methoxy}phenoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example

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- 2-{4-[{(2S)-1-(4-dimethylcarbamoylphenyl)-2-pyrrolidinyl}methoxylphenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 228),
  - 2-{4-[2-(4-chlorophenyl)-5-ethoxycarbonylbenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 229),
  - 1-cyclohexyl-2-[4-(3-trifluoromethylphenoxy)phenyl]benzimidazole-5-carboxylic acid (Example 230),
- 25 1-cyclohexyl-2-{4-[{4-(4-dimethylcarbamoylphenyl)-2-methyl-5-thiazolyl}methoxy]phenyl}benzimidazole-5-carboxylic acid (Example 231),
  - 2-{4-[2-(4-chlorophenyl)-5-dimethylcarbamoylbenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 232),
  - 2-{4- [{4-(4-chlorophenyl) -2-methyl-5-pyrimidinyl}methoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 233),
    - 2-{4-[{2-(4-chlorophenyl)-3-pyridyl}methoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid dihydrochloride (Example 234),
    - 2-{4-[{3-(4-chlorophenyl)-2-pyridyl}methoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 235), 2-{4-[2-(3-chlorophenyl)-4-methylamino-1,3,5-triazin-6-yloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid trifluoroacetate (Example 236).
    - 2-{4-[2-(4-chlorophenyl)-4-(5-tetrazolyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 237),
    - 2-[4-(4-benzyloxy-6-pyrimidinyloxy)phenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 238),
    - 1-cyclohexyl-2-{4-[4-(4-pyridylmethoxy)-6-pyrimidinyloxy]phenyl}benzimidazole-5-carboxylic acid (Example 239),
    - 2-{4-[4-(3-chlorophenyl)-6-pyrimidinyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 240), methyl 2-{4-[2-(4-chlorophenyl)-5-methoxybenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylate (Example 241),
    - 2-{4-[2-(4-chlorophenyl)-5-methoxybenzyloxylphenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 242),
- ethyl 2-{4-[3-(4-chlorophenyl)pyridin-2-ylmethoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylate (Example 243),
  - methyl 2-[4-(2-bromo-5-tert-butoxycarbonylbenzyloxy)phenyl]-1-cyclohexylbenzimidazole-5-carboxylate (Example 244),
  - methyl 2-{4-[5-tert-butoxycarbonyl-2-(4-chlorophenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylate (Example 245),
  - methyl 2-{4-[5-carboxy-2-(4-chlorophenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylate hydrochloride (Example 246),
  - methyl 2-{4-[2-(4-chlorophenyl)-5-methylcarbamoylbenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylate (Example 247),
- <sup>55</sup> 2-{4-[2-(4-chlorophenyl)-5-methylcarbamoylbenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 248),
  - 2-{4-[3-(tert-butylsulfamoyl)-6-(4-chlorophenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 249),

- 2-{4-[2-(4-chlorophenyl)-5-sulfamoylbenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid trifluoroace-tate (Example 250).
- 2-(4-benzyloxycyclohexyl)-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 251),
- 2-[2-(2-biphenylyloxymethyl)-5-thienyl]-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 252),
- 5 2-[2-(2-biphenylyloxymethyl)-5-furyl]-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 253),

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- 1-cyclohexyl-2-{4-[{4-(4-fluorophenyl)-2-hydroxymethyl-5-thiazolyl}methoxy]phenyl}benzimidazole-5-carboxylic acid (Example 254),
- 1-cyclohexyl-2-{4-[{4-(4-carboxyphenyl)-2-methyl-5-thiazolyl}methoxy]phenyl}benzimidazole-5-carboxylic acid hydrochloride (Example 255),
- 1-cyclohexyl-2-{2-fluoro-4-[4-fluoro-2-(3-fluorobenzoyl)benzyloxy]phenyl}benzimidazole-5-carboxylic acid (Example 256),
  - 2-{4-[2-(4-chlorophenyl)-5-methoxybenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-sulfonic acid (Example 257), 2-{4-[2-(4-chlorophenyl)-5-methoxybenzyloxy]phenyl}-3-cyclohexylbenzimidazole-4-carboxylic acid (Example 258).
- 1-cyclohexyl-2-{4-[3-dimethylcarbamoyl-5-(4-pyridylmethoxy)phenoxy]phenyl}benzimidazole-5-carboxylic acid dihydrochloride (Example 259),
  - 1-cyclohexyl-2-{4-[3-carboxy-5-(4-pyridylmethoxy)phenoxy]phenyl}benzimidazole-5-carboxylic acid dihydrochloride (Example 260),
  - 2-{4-[2-(4-chlorophenyl)-5-methoxybenzyloxy]phenyl}-1-cyclohexylbenzimidazole-4-carboxylic acid (Example 261).
    - 2-{4-[3-carbamoyl-6-(4-chlorophenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 262),
    - 2-{4- [{2-(4-carboxyphenyl)-3-pyridyl}methoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 263).
- 2-{4-[2-(4-chlorophenyl)-5-methoxybenzyloxy]phenyl}-1-(4-tetrahydrothiopyranyl)benzimidazole-5-carboxylic acid (Example 264),
  - 2-{4-[2-(4-chlorophenyl)-5-dimethylcarbamoylbenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 265),
  - 1-cyclohexyl-2-{4-[3-dimethylcarbamoyl-6-(4-trifluoromethylphenyl)benzyloxy]phenyl}benzimidazole-5-carboxylic acid hydrochloride (Example 266),
  - 1-cyclohexyl-2-{4-[3-dimethylcarbamoyl-6-(4-methylthiophenyl)benzyloxy]phenyl}benzimidazole-5-carboxylic acid hydrochloride (Example 267),
  - 2-{4-[2-(4-chlorophenyl)-5-methylcarbamoylbenzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 268),
- 35 2-{4-[2-(4-chlorophenyl)-5-dimethylcarbamoylbenzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 269),
  - 2-{4-[3-carbamoyl-6-(4-chlorophenyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 270),
  - 2-{4-[3-dimethylcarbamoyl-6-(4-methanesulfonylphenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 271),
  - 2-{4-[3-dimethylcarbamoyl-6-(3-pyridyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid dihydrochloride (Example 272),
  - 2-{4-[3-dimethylcarbamoyl-6-(4-dimethylcarbamoylphenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 273),
- 45 2-{4-[2-(4-chlorophenyl)-5-methoxybenzyloxy]phenyl}-1-(1-oxo-4-tetrahydrothiopyranyl)benzimidazole-5-carbox-ylic acid (Example 274),
  - 2-{4-[2-(4-chlorophenyl)-5-methoxybenzyloxy]phenyl}-1-(1,1-dioxo-4-tetrahydrothiopyranyl)benzimidazole-5-car-boxylic acid (Example 275),
  - 2-{4-[2-(4-chlorophenyl)-5-methoxybenzyloxy]-2-fluorophenyl}-1-(4-tetrahydrothiopyranyl)benzimidazole-5-carboxylic acid (Example 276),
  - 2-{4-[2-(4-chlorophenyl)-5-methoxybenzyloxy]-2-fluorophenyl}-1-(1-oxo-4-tetrahydrothiopyranyl)benzimidazole-5-carboxylic acid (Example 277),
  - 2-{4-[2-(4-chlorophenyl)-5-methoxybenzyloxy]-2-fluorophenyl}-1-(1,1-dioxo-4-tetrahydrothiopyranyl)benzimida-zole-5-carboxylic acid (Example 278),
- 55 2-{4-[2-(4-chlorophenyl)-5-dimethylsulfamoylbenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 279),
  - 2-{4-[2-(4-chlorophenyl)-5-methanesulfonylbenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 280),

- $\hbox{$2$-{4-[2-(4-chlorophenyl)-5-methylsulfamoylbenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic\ acid\ (Example 281),}$
- $\hbox{$2$-${4-[2-(4-chlorophenyl)-5-dimethylaminobenzyloxy]phenyl}-1$-cyclohexylbenzimidazole-5-carboxylic acid (Example 282),}$
- <sup>5</sup> 2-{4-[2-(4-chlorophenyl)-5-methanesulfonylaminobenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 283),
  - $\hbox{$2$-(4-[2-(4-chlorophenyl)-5-diethylcarbamoylbenzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylicacid (Example 284),}$
  - 2-{4-[2-(4-chlorophenyl)-5-isopropylcarbamoylbenzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxy-lic acid (Example 285),
    - $\hbox{$2$-{4-[2-(4-chlorophenyl)-5-piperidinocarbonylbenzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 286),}$
    - 2-{4-[2-(4-chlorophenyl)-5-(1-pyrrolidinyl)carbonylbenzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 287),
- 2-{4-[2-(4-chlorophenyl)-5-(2-hydroxyethyl)carbamoylbenzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 288),

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- 2-{4-[2-(4-chlorophenyl)-5-(4-hydroxypiperidino)-carbonylbenzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 289),
- 2-{4-[2-(4-chlorophenyl)-5-morpholinocarbonylbenzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxy-lic acid (Example 290),
  - 2-{4-[2-(4-chlorophenyl)-5-thiomorpholinocarbonylbenzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 291),
  - 2-{4-[3-(carboxymethylcarbamoyl)-6-(4-chlorophenyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 292),
- 2-{4-[2-{4-(2-carboxyethyl)phenyl}-5-chlorobenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 293),
  - 2-{4-[3-chloro-6-(4-hydroxymethylphenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 294),
  - 2-{4-[3-chloro-6-(4-methoxymethylphenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 295),
  - 2-{4-[2-(3-carboxyphenyl)-5-chlorobenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 296),
  - $\hbox{$2-\{4-[2-(4-chlorophenyl)-5-methylthiobenzyloxy]phenyl\}-1-cyclohexylbenzimidazole-5-carboxylic\ acid\ (Example 297),}$
- 2-{4-[2-(4-chlorophenyl)-5-methylsulfinylbenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 298),
  - 2-{4-[2-(4-chlorophenyl)-5-cyanobenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 299), 2-{4-[bis (2-pyridyl)methoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 300),
  - 2-{4-[bis(4-dimethylcarbamoylphenyl)methoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 301),
    - 2-{4-[bis(2-thienyl)methoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 302),
    - $\begin{tabular}{ll} methyl & 2-\{4-[2-(4-chlorophenyl)-5-(dimethylcarbamoyl)benzyloxy]-2-fluorophenyl\}-1-cyclohexylbenzimidazole-5-carboxylate (Example 303) , \\ \end{tabular}$
  - sodium 2-{4-[2-(4-chlorophenyl)-5-(dimethylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylate (Example 304),
  - $\hbox{$2$-{4-[5-carboxy-2-(4-chlorophenyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic\ acid\ (Example 305),}$
  - 2-{4-[2-(4-carboxyphenyl)-5-methoxybenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 306),
- 2-{4-[2-(4-carbamoylphenyl)-5-(dimethylcarbamoyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 307),
  - 2-{4-[5-amino-2-(4-chlorophenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 308), 2-{4-[5-(4-chlorophenyl)-2-methoxybenzylsulfinyl)phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 309),
- 2-{4-[5-(4-chlorophenyl)-2-methoxybenzylsulfonyl]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 310),
  - $\hbox{$2-\{4-[2-(4-chlorophenyl)-5-methoxybenzylthio]phenyl\}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 311),}$

- 2-(4-[bis(4-carboxyphenyl)methoxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 312), 2-[4-(phenyl-3-pyridylmethoxy)-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 313),
- methyl 2-{4-[2-(4-chlorophenyl)-5-(methylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylate (Example 314),
- 5 2-{4-[5-chloro-2-(4-pyridyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 315).

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- 2-{4-[2-(4-chlorophenyl)-5-(benzylcarbamoyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 316),
- 2-{4-[2-(4-chlorophenyl)-5-(cyclohexylmethylcarbamoyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 317).
- 2-{4-[2-(4-chlorophenyl)-5-(4-pyridylmethylcarbamoyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid dihydrochloride (Example 318),
- 2-{4-[2-(4-chlorophenyl)-5-(N-benzyl-N-methylcarbamoyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 319),
- 2-{4-[5-dimethylaminocarbonyl-2-(4-pyridyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid dihydrochloride (Example 320),
  - 2-{4-[2-(4-chlorophenyl)-5-(4-methylpiperazin-1-ylcarbonyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid dihydrochloride (Example 321),
  - 2-{4-[2-(4-chlorophenyl)-5-{N-(3-pyridylmethyl)carbamoyl}benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid dihydrochloride (Example 322).
  - 2-{4-[2-(4-chlorophenyl)-5-{N-(2-pyridylmethyl)carbamoyl}benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid dihydrochloride (Example 323),
  - 2-{4-[2-(4-chlorophenyl)-5-(cyclohexylcarbamoyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 324),
- 2-{4-[2-(4-chlorophenyl)-5-(2-pyridin-4-ylethylcarbamoyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-car-boxylic acid dihydrochloride (Example 325),
  - 2-{4-[(4-fluorophenyl){4-(dimethylaminocarbonyl)phenyl}methoxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 326),
  - 2-{4-[(4-fluorophenyl)(4-carboxyphenyl)methoxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 327),
  - 2-{4-[2-(4-chlorophenyl)-5-(4-oxopiperidinocarbonyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 328),
  - 2-{4-[2-(4-chlorophenyl)-5-hydroxybenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 329),
- 2-{4-[2-(4-chlorophenyl)-5-(isopropylcarbamoyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 330),
  - 2-{4-[2-(4-chlorophenyl)-5-(N-isopropyl-N-methylcarbamoyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 331),
  - 2-{4-[2-(4-chlorophenyl)-5-(phenylcarbamoyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 332).
    - 2-{4-[2-(4-chlorophenyl)-5-(4-methoxypiperidinocarbonyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 333),
    - 2-{4-[2-(4-chlorophenyl)-5-(3-hydroxypropyloxy)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 334).
- 45 2-{4-[2-(4-chlorophenyl)-5-(2-hydroxyethoxy)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 335),
  - methyl 2-[4-(2-bromo-5-nitrobenzyloxy)-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylate (Example 336), methyl 2-[4-(2-(4-chlorophenyl)-5-nitrobenzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylate (Example 337),
- methyl 2-[4-{5-amino-2-(4-chlorophenyl)benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylate (Example 338),
  - methyl 2-[4-{2-(4-chlorophenyl)-5-(2-oxopyrrolidin-1-yl)benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylate (Example 339),
  - 2-[4-{2-(4-chlorophenyl)-5-(2-oxopyrrolidin-1-yl)benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 340),
    - 2-{4-[2-(4-chlorophenyl)-5-(4-methylpiperidin-1-ylcarbonyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 341).
    - 2-{4-[5-acetyl-2-(4-chlorophenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride

(Example 342),

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- 2-{4-[2-(4-chlorophenyl)-5-{(4-hydroxypiperidin-1-ylcarbonyl)methoxy}benzyloxy]phenyl}-1-cyclohexylbenzimida-zole-5-carboxylic acid (Example 343),
- 2-{4-[2-(4-chlorophenyl)-5-(2-methoxyethoxy)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 344),
- 2-{4-[2-(4-chlorophenyl)-5-{2-(2-methoxyethoxy)ethoxy}benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 345).
- 2-{4-[2-(4-chlorophenyl)-5-(isobutylcarbonyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 346),
- 2-{4-[2-(4-chlorophenyl)-5-(2-methylthiazol-4-yl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 347),
  - 2-{4-[2-(4-chlorophenyl)-5-(3,4-dihydroxypiperidin-1-ylcarbonyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 348),
  - 2-{4-[2-(4-chlorophenyl)-5-(3-methyl-1,2,4-oxadiazol-5-yl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 349).
  - 2-{4-[2-(4-chlorophenyl)-4-(isopropylcarbamoyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 350),
  - 2-{4-[2-(4-chlorophenyl)-4-(piperidinocarbonyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 351),
- 2-{4-[2-(4-chlorophenyl)-5-{(1-hydroxy-2-methylpropan-2-yl)carbamoyl}benzyloxy]phenyl}-1-cyclohexylbenzimi-dazole-5-carboxylic acid hydrochloride (Example 352),
  - 2-{4-[2-(4-chlorophenyl)-5-(4,4-dimethyl-2-oxazolin-2-yl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid dihydrochloride (Example 353),
- 2-{4-[2-(4-chlorophenyl)-4-(4-hydroxypiperidin-1-ylcarbonyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-car-boxylic acid hydrochloride (Example 354),
  - 2-{4-[2-(4-chlorophenyl)-4-{(2-hydroxyethyl)carbamoyl}benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 355),
  - 2-{4-[2-(4-chlorophenyl)-4-{(4-pyridylmethyl)carbamoyl}benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 356),
- 2-{4-[2-(4-chlorophenyl)-4-(dimethylcarbamoyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 357),
  - $2-\{4-[5-(2-aminothiazol-4-yl)-2-(4-chlorophenyl)benzyloxy] phenyl\}-1-cyclohexylbenzimidazole-5-carboxylic acid dihydrochloride (Example 358), \\$
  - 2-{4-[2-(4-chlorophenyl)-5-(4-hydroxypiperidin-1-ylsulfonyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-car-boxylic acid hydrochloride (Example 359),
  - 2-{4- [5- (dimethylcarbamoyl) -2- (4-fluorophenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 360),
  - 2-{4-[5-(dimethylcarbamoyl)-2-(3-fluorophenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 361).
- 2-{4-[2-(5-chlorothiophen-2-yl)-5-(dimethylcarbamoyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 362),
  - $2-\{4-[2-bromo-5-(5-methyloxazol-2-yl)benzyloxy] phenyl\}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 363),\\$
  - 2-{4-[2-bromo-5-(5-methylthiazol-2-yl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 364),
    - $\hbox{$2-\{4-[2-(4-chlorophenyl)-5-(5-methyloxazol-2-yl)benzyloxy]phenyl\}-1-cyclohexylbenzimidazole-5-carboxylic} \ \ acid hydrochloride (Example 365),$
    - 2-{4-[2-(4-chlorophenyl)-5-(5-methylthiazol-2-yl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 366),
- 2-{4-[2-(4-chlorophenyl)-5-tetrazol-5-ylbenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 367),
  - $\hbox{$2-\{4-[5-chloro-2-(4-cyanophenyl)benzyloxy]phenyl\}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 368),}$
  - 2-{4-[5-chloro-2-(4-tetrazol-5-ylphenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydro-chloride (Example 369),
    - 2-{4-[2-(4-chlorophenyl)-5-{2-(4-hydroxypiperidin-1-yl)ethoxy}benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 370),
    - 2-{4-[2-(4-chlorophenyl)-5-(2-oxopiperidin-1-yl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carbox-

ylic acid hydrochloride (Example 371),

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- 2-{4-[3-(4-chlorophenyl)-5-(dimethylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 372),
- 2-(4-[2-(4-chlorophenyl)-5-(N-hydroxyamidino)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxy-lic acid dihydrochloride (Example 373),
  - 2-{4-(2-(4-chlorophenyl)-5-(2,5-dihydro-5-oxo-4H-1,2,4-oxadiazol-3-yl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 374),
  - 2-{4-[2-(4-chlorophenyl)-5-(2-oxo-3H-1,2,3,5-oxathiadiazol-4-yl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 375),
- 10 2-{4-[2-(4-chlorophenyl)-5-(2,5-dihydro-5-oxo-4H-1,2,4-thiadiazol-3-yl)benzyloxy]-2-fluorophenyl}-1-cyclohexyl-benzimidazole-5-carboxylic acid hydrochloride (Example 376),
  - 2-(4-[2-(4-chlorophenyl)-5-(cyclopropylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 377),
  - 2-{4-[2-(4-chlorophenyl)-5-(cyclobutylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 378),
  - 2-{4-[2-(4-chlorophenyl)-5-(tert-butylcarbamoyl)benzyloxyl-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 379),
  - 2-{4-[2-(4-chlorophenyl)-5-(isobutylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 380),
- 2-{4-[2-(4-chlorophenyl)-5-{(1-hydroxypropan-2-yl)carbamoyl}benzyloxy}-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 381),
  - 2-{4-[2-(4-chlorophenyl)-5-(methoxycarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carbox-vlic acid hydrochloride (Example 382),
  - 2-{4-[2-(4-chlorophenyl)-5-{(2,3-dihydroxypropyl)carbamoyl}benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimida-zole-5-carboxylic acid hydrochloride (Example 383).
    - 2-{4-[2-(4-chlorophenyl)-5-(N-ethyl-N-methylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 384).
    - 2-{4-[2-(4-chlorophenyl)-5-(N-methyl-N-propylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride.(Example 385),
- 30 2-{4-[2-(4-chlorophenyl)-5-(N-isopropyl-N-methylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 386),
  - 2-{4-[2-(4-chlorophenyl)-5-(2,6-dimethylpiperidin-1-ylcarbonyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 387),
  - 2-(4-[5-(butylcarbamoyl)-2-(4-chlorophenyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 388),
    - 2-{4-[2-(4-chlorophenyl)-5-(propylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 389),
    - 2-{4-[2-(4-chlorophenyl)-5-(ethylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 390),
- 40 2-{4-[2-(4-chlorophenyl)-5-{(dimethylcarbamoyl)amino}benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 391),
  - 2-{4-[2-(4-chlorophenyl)-5-{(morpholinocarbonyl)amino}benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 392),
  - 2-{4-[2-(4-chlorophenyl)-5-ureidobenzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 393),
  - 2-{4-[2-(4-chlorophenyl)-5-{(ethylcarbamoyl)amino}benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 394),
  - 2-{4-[2-(4-chlorophenyl)-5-{(isopropylcarbamoyl)amino}benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 395),
- <sup>50</sup> 2-{4- [2- (3, 4-difluorophenyl) -5- (isopropylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 396),
  - 2-{4-[2-(2,4-difluorophenyl)-5-(isopropylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 397),
  - 2-{4-[2-(3,5-dichlorophenyl)-5-(isopropylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 398),
  - 2-{4-[2-(3-chloro-4-fluorophenyl)-5-(isopropylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 399),
  - 2-{4- [2- (3, 4-dichlorophenyl)-5-(isopropylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-

5-carboxylic acid hydrochloride (Example 400),

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- 2-{4-[2-(4-chloro-2-fluorophenyl)-5-(isopropylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 401),
- 2-{4-[2-(4-chloro-2-fluorophenyl)-5-(pyrrolidin-1-ylcarbonyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimida-zole-5-carboxylic acid hydrochloride (Example 402).
- 2-{4-[2-(4-chloro-3-fluorophenyl)-5-(pyrrolidin-1-ylcarbonyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimida-zole-5-carboxylic acid hydrochloride (Example 403).
- 2-{4-[2-(4-chloro-3-fluorophenyl)-5-(isopropylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 404).
- 2-{4-[2-{4-(methylthio)phenyl}-5-(2-oxopyrrolidin-1-yl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 405),
  - 2-{4-[2-{4-(methylthio)phenyl}-5-(isopropylcarbamoyl)benzyloxy}-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 406),
  - 2-{4-[4-chloro-2-(4-chlorophenyl)-5-(1,1-dioxoisothiazolidin-2-yl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 407).
  - 2-{4-[4-chloro-2-(4-chlorophenyl)-5-(2-oxopyrrolidin-1-yl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 408),
  - 2-{4-[2-(4-chlorophenyl)-5-(isopropylaminosulfonyl)benzyloxy]-2fluorophenyl}-1-cyclohexylbenzimidazole-5-car-boxylic acid hydrochloride (Example 409).
- 2-{4-[2-(4-chlorophenyl)-5-(dimethylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclopentylbenzimidazole-5-car-boxylic acid hydrochloride (Example 410),
  - 2-{4-[2-(4-chlorophenyl)-5-(4-hydroxypiperidin-1-ylcarbonyl)benzyloxy]-2-fluorophenyl}-1-cyclopentylbenzimidazole-5-carboxylic acid hydrochloride (Example 411),
- 2-{4-[2-(4-chlorophenyl)-5-(isopropylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclopentylbenzimidazole-5-car-boxylic acid hydrochloride (Example 412),
  - 2-{4-[2-(4-chlorophenyl)-5-(isopropylcarbamoyl)benzyloxy]phenyl}-1-cyclopentylbenzimidazole-5-carboxylic acid hydrochloride (Example 413),
  - 2-{4-[2-(4-chlorophenyl)-5-(dimethylcarbamoyl)benzyloxy]phenyl}-1-cyclopentylbenzimidazole-5-carboxylic acid hydrochloride (Example 414),
- 2-{4-[2-(4-chlorophenyl)-5-(4-hydroxypiperidin-1-ylcarbonyl)benzyloxy]phenyl}-1-cyclopentylbenzimidazole-5-carboxylic acid hydrochloride (Example 415),
  - 2-{4-[2-(4-chlorophenyl)-5-(isopropylcarbamoyl)benzyloxy]phenyl}-1-(tetrahydrothiopyran-4-yl)benzimidazole-5-carboxylic acid hydrochloride (Example 416),
  - 2-{4-[2-(4-chlorophenyl)-5-(pyrrolidin-1-ylcarbonyl)benzyloxy]phenyl}-1-(tetrahydrothiopyran-4-yl)benzimidazole-5-carboxylic acid hydrochloride (Example 417),
    - 2-{4-[2-(4-chlorophenyl)-5-(isopropylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-{tetrahydrothiopyran-4-yl)benzimidazole-5-carboxylic acid hydrochloride (Example 418),
  - 2-{4-[2-(4-chlorophenyl)-5-(2-oxopyrrolidin-1-yl)benzyloxy]-2-fluorophenyl}-1-(tetrahydrothiopyran-4-yl)benzimidazole-5-carboxylic acid hydrochloride (Example 419),
- 2-{4-[2-(4-chlorophenyl)-5-(isopropylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-piperidinobenzimidazole-5-carboxylic acid hydrochloride (Example 420),
  - 2-{4-[2-(4-chlorophenyl)-5-(pyrrolidin-1-ylcarbonyl)benzyloxy]-2-fluorophenyl}-1-piperidinobenzimidazole-5-carboxylic acid (Example 421),
  - 2-{4-[2-(4-chlorophenyl)-5-(2-imidazolin-2-yl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid dihydrochloride (Example 422),
    - 2-{4-[2-(4-chlorophenyl)-5-(2-oxooxazolidin-3-yl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 423),
    - 2-{4-[2-(4-chlorophenyl)-5-(2-oxoimidazolidin-1-yl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-car-boxylic acid hydrochloride (Example 424),
- 2-{4-[2-(4-chlorophenyl)-5-(2-oxazolin-2-ylamino)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-car-boxylic acid dihydrochloride (Example 425),
  - 2-{4-[{2-[{(dimethylcarbamoyl)methoxy}methyl]-4-(4-fluorophenyl)thiazol-5-yl}methoxy]phenyl}-1-cyclohexylben-zimidazole-5-carboxylic acid hydrochloride (Example 426),
  - 2-{4-[{4-(4-fluorophenyl)-2-(4-hydroxypiperidin-1-ylmethyl)thiazol-5-yl}methoxy]phenyl}-1-cyclohexylbenzimida-zole-5-carboxylic acid dihydrochloride (Example 427),
    - 2-{4-[{4-(4-fluorophenyl)-2-[(carbamoylmethoxy)methyl]thiazol-5-yl}methoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 428),
    - 2-{4-[{4-(4-fluorophenyl)-2-(methylcarbamoyl)thiazol-5-yl}methoxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-

- 5-carboxylic acid hydrochloride (Example 429),
- 2-{4-[{4-(4-fluorophenyl)-2-{(2-hydroxyethyl)carbamoyl}thiazol-5-yl}methoxy}-2-fluorophenyl}-1-cyclohexylbenz-imidazole-5-carboxylic acid hydrochloride (Example 430),
- 2-{4-[{2-(4-fluorophenyl)-5-(dimethylcarbamoyl)thiophen-3-yl}methoxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 431),
  - 2-{4-[{2-(4-fluorophenyl)-5-(isopropylcarbamoyl) thiophen-3-yl}methoxy]-2-fluorophenyl}-1-cyclohexylbenzimida-zole-5-carboxylic acid hydrochloride (Example 432),
  - 2-{4-[{2-(4-fluorophenyl)-5-(4-hydroxypiperidin-1-ylcarbonyl)thiophen-3-yl}methoxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 433),
- 10 2-{4-[2-(4-chlorophenyl)-5-(dimethylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexyl-5-tetrazol-5-ylbenzimidazole (Example 434),
  - 2-{4-[2-(4-carboxyphenyl)-5-chlorobenzyloxy]-2-fluorophenyl}-1-cyclohexyl-5-tetrazol-5-ylbenzimidazole hydrochloride (Example 435),
  - $2-\{4-[2-(4-chlorophenyl)-5-(isopropylcarbamoyl)benzyloxy]-2-fluorophenyl\}-1-cyclohexyl-5-(2,5-dihydro-5-oxo-10,0)-1-cyclohex$
- 4H-1,2,4-oxadiazol-3-yl)benzimidazole hydrochloride (Example 436),

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- 2-{4-(5-carboxy-2-(4-chlorophenyl)benzyloxy]-2-fluorophenyl}-5-cyano-1-cyclohexylbenzimidazole (Example 437),
- 2-{4-[2-(4-chlorophenyl)-5-(dimethylcarbamoyl)benzyloxy]-2-fluorophenyl}-5-cyano-1-cyclohexylbenzimidazole (Example 438),
- 2-{4-[{N-(4-dimethylcarbamoyl)-N-(4-fluorophenyl)amino}methyl]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 439),
  - 2-{5-[bis(3-fluorophenyl)methyl]-2-fluoro-4-hydroxyphenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 440).
  - 2-{3-[bis(3-fluorophenyl)methyl]-2-fluoro-4-hydroxyphenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 441).
  - 2-{4-[(3-dimethylcarbamoylphenyl)(4-fluorophenyl)methoxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 442).
  - 2-{4-[{3-(4-hydroxypiperidyl-1-ylcarbonyl)phenyl}(4-fluorophenyl)methoxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 443).
- 30 1-{[2-{4- ([4-(4-fluorophenyl)-2-methylthiazol-5-yl]methoxy)phenyl}-1-cyclohexylbenzimidazol-5-yl]carbonyl}-β-D-glucuronic acid (Example 444),
  - {[2-{4-[bis(3-fluorophenyl)methoxy]-2-fluorophenyl}-1-cyclohexylbenzimidazol-5-yl]carbonyl}-β-D-glucuronic acid (Example 445),
  - 2-{4-[2-(4-chlorophenyl)-5-(1,1-dioxoisothiazolidin-2-yl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 446),
  - 3-{[4-(5-aminosulfonyl-1-cyclohexylbenzimidazol-2-yl)-3-fluorophenoxy]methyl}-4-(4-chlorophenyl)-N-isopropylbenzamide (Example 447),
  - 2-[4-{2-(4-chlorophenyl)-6-(isopropylaminocarbonyl)benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 448),
- 40 2-[4-(2-(4-chlorophenyl)-4-fluoro-5-(1,1-dioxoisothiazolidin-2-yl)benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimi-dazole-5-carboxylic acid hydrochloride (Example 449),
  - 2-[4-{2-(4-chlorophenyl)-5-(isopropylaminocarbonyl)benzyloxy}-2-fluorophenyl]-1-cyclohexyl-4-methoxybenzimidazole-5-carboxylic acid hydrochloride (Example 450),
  - 2-[4-{2-(4-chlorophenyl)-5-(N-isopropylcarbonyl-N-methylamino)benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 451),
  - 2-[4-{2-(4-chlorophenyl)-5-(isopropylcarbonylamino)benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 452),
  - 2-[3-{[4-(4-fluorophenyl)-2-methylthiazol-5-yl]methyl}-4-hydroxyphenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 453),
- 50 2-[4-{2-(4-chlorophenyl)-4-fluoro-5-(2-oxopyrrolidin-1-yl)benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 454),
  - 2-[4-{2-(4-chlorophenyl)-5-(methylsulfonylamino)benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-car-boxylic acid hydrochloride (Example 455),
- 2-[4-{2-(4-chlorophenyl)-5-[N-methyl-N-(methylsulfonyl)amino]benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 456),
  - 2-[4-{[3-(4-chlorophenyl)-6-(2-oxopyrrolidin-1-yl)pyridin-2-yl]methyloxy}-2-fluorophenyl]-1-cyclohexylbenzimida-zole-5-carboxylic acid hydrochloride (Example 457),
  - 2-[4-{2-(4-chlorophenyl)-5-(acetylamino)benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid

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hydrochloride (Example 458),
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- 2-[4-{2-(4-chlorophenyl)-5-(N-acetyl-N-ethylamino)benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-car-boxylic acid hydrochloride (Example 459),
- 2-[4-{2-(4-chlorophenyl)-5-(N-acetyl-N-propylamino)benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 460).
  - 2-[4-{2-(4-chlorophenyl)-5-[N-ethyl-N-(methylsulfonyl)amino]benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimida-zole-5-carboxylic acid hydrochloride (Example 461).
  - 2-[4-{2-(4-chlorophenyl)-5-[N-(methylsulfonyl)-N-propylamino]benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 462), 2-[4-{2-(4-chlorophenyl)-5-(N-acetyl-N-methylamino)benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 463),
- 2-[4-{2-(4-chlorophenyl)-5-[N-(ethylsulfonyl)-N-methylamino]benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimida-zole-5-carboxylic acid hydrochloride (Example 464),
  - 2-[4-{2-(4-chlorophenyl)-5-[N-ethyl-N-(ethylsulfonyl)amino]benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 465),
- 2-[4-{2-(4-chlorophenyl)-5-[N-(ethylcarbonyl)-N-methylamino]benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimida-zole-5-carboxylic acid hydrochloride (Example 466),
  - 2-[4-{2-(4-chlorophenyl)-5-[N-ethyl-N-(ethylcarbonyl)amino]benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimida-zole-5-carboxylic acid hydrochloride (Example 467),
  - 2-[4-{2-(4-chlorophenyl)-5-methoxybenzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 468),
  - 2-[4-{2-(4-chlorophenyl)-5-(N-acetyl-N-isopropylamino)benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 469),
  - $\label{eq:constraint} $$ \{[2-\{4-[2-(4-chlorophenyl]-5-(2-oxopyrrolidin-1-yl)benzyloxy]-2-fluorophenyl\}-1-cyclohexylbenzoimidazol-5-yl]carbonyl\\ -\beta-D-glucuronic acid (Example 470), $$$
- methyl 2-{4-[2-(4-chlorophenyl)-5-methoxybenzyloxy]phenyl}-1-cyclohexylindole-5-carboxylate (Example 501), 2-{4-[2-(4-chlorophenyl)-5-methoxybenzyloxy]phenyl}-1-cyclohexyl-1H-indole-5-carboxylic acid (Example 502), 2-(4-benzyloxyphenyl)-1-cyclopentyl-1H-indole-5-carboxylic acid (Example 503), ethyl 2-(4-benzyloxyphenyl)-3-cyclohexylimidazo[1,2-a]pyridine-7-carboxylate (Example 601),
  - 2-(4-benzyloxyphenyl)-3-cyclohexylimidazo[1,2-a]pyridine-7-carboxylic acid (Example 602),
- 2-{4-[2-(4-chlorophenyl)-5-methoxybenzyloxy]phenyl}-3-cyclohexyl-3H-imidazo[4,5-b]pyridine-6-carboxylic acid (Example 701),
  - 2-{4-[2-(4-chlorophenyl)-5-(isopropylcarbamoyl)benzyloxy]phenyl}-3-cyclohexyl-3H-imidazo[4,5-b]pyridine-6-carboxylic acid hydrochloride (Example 702), and
  - 2-{4-[2-(4-chlorophenyl)-5-(pyrrolidin-1-ylcarbonyl)benzyloxy]phenyl}-3-cyclohexyl-3H-imidazo[4,5-b]pyridine-6-carboxylic acid hydrochloride (Example 703).
  - (62) The fused ring compound of the formula [I] or a pharmaceutically acceptable salt thereof, which is selected from the group consisting of
  - 2-{4-[2-(4-chlorophenyl)-5-(4-oxopiperidinocarbonyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 328),
- <sup>40</sup> 2-{4-[2-(4-chlorophenyl)-5-hydroxybenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 329),
  - $2-\{4-[2-(4-chlorophenyl)-5-(isopropylcarbamoyl)benzyloxy] phenyl\}-1-cyclohexylbenzimidazole-5-carboxylic \ acid hydrochloride (Example 330), \\$
  - 2-{4-[2-(4-chlorophenyl)-5-(N-isopropyl-N-methylcarbamoyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-
- 5-carboxylic acid hydrochloride (Example 331),
  - 2-{4-[2-(4-chlorophenyl)-5-(phenylcarbamoyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 332),
  - 2-{4-[2-(4-chlorophenyl)-5-(4-methoxypiperidinocarbonyl)-benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-car-boxylic acid hydrochloride (Example 333),
- <sup>50</sup> 2-{4-[2-(4-chlorophenyl)-5-(3-hydroxypropyloxy)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 334),
  - 2-{4-[2-(4-chlorophenyl)-5-(2-hydroxyethoxy)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 335),
- methyl 2-[4-(2-bromo-5-nitrobenzyloxy)-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylate (Example 336), methyl 2-[4-{2-(4-chlorophenyl)-5-nitrobenzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylate (Example 337),
  - methyl 2-[4-{5-amino-2-(4-chlorophenyl)benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylate (Example 338),

- methyl 2-[4-{2-(4-chlorophenyl)-5-(2-oxopyrrolidin-1-yl)benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylate (Example 339).
- 2-[4-{2-(4-chlorophenyl)-5-(2-oxopyrrolidin-1-yl)benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 340),
- 5 2-{4-[2-(4-chlorophenyl)-5-(4-methylpiperidin-1-ylcarbonyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-car-boxylic acid hydrochloride (Example 341),

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- 2-{4-[5-acetyl-2-(4-chlorophenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 342),
- 2-{4-[2-(4-chlorophenyl)-5-{(4-hydroxypiperidin-1-ylcarbonyl)methoxy}benzyloxy]phenyl}-1-cyclohexylbenzimida-zole-5-carboxylic acid (Example 343),
- 2-{4-[2-(4-chlorophenyl)-5-(2-methoxyethoxy)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 344),
- 2-{4-[2-(4-chlorophenyl)-5-{2-(2-methoxyethoxy)ethoxy}benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 345),
- 2-{4-[2-(4-chlorophenyl)-5-(isobutylcarbonyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 346),
  - 2-{4-[2-(4-chlorophenyl)-5-(2-methylthiazol-4-yl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 347),
  - 2-{4-[2-(4-chlorophenyl)-5-(3,4-dihydroxypiperidin-1-ylcarbonyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 348),
  - 2-{4-[2-(4-chlorophenyl)-5-(3-methyl-1,2,4-oxadiazol-5-yl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 349),
  - 2-{4-[2-(4-chlorophenyl)-4-(isopropylcarbamoyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 350).
- 2-5 2-{4-[2-(4-chlorophenyl)-4-(piperidinocarbonyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 351),
  - 2-{4-[2-(4-chlorophenyl)-5-{(1-hydroxy-2-methylpropan-2-yl)carbamoyl}benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 352),
  - 2-{4-[2-(4-chlorophenyl)-5-(4,4-dimethyl-2-oxazolin-2-yl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid dihydrochloride (Example 353),
  - 2-{4-[2-(4-chlorophenyl)-4-(4-hydroxypiperidin-1-ylcarbonyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 354),
  - 2-{4-[2-(4-chlorophenyl)-4-{(2-hydroxyethyl)carbamoyl}benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 355),
- 35 2-{4-[2-(4-chlorophenyl)-4-{(4-pyridylmethyl)carbamoyl}benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carbox-ylic acid (Example 356),
  - 2-{4-[2-(4-chlorophenyl)-4-(dimethylcarbamoyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 357),
  - 2-{4-[5-(2-aminothiazol-4-yl)-2-(4-chlorophenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid dihydrochloride (Example 358),
  - 2-{4-[2-(4-chlorophenyl)-5-(4-hydroxypiperidin-1-ylsulfonyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 359),
  - 2-{4-[5-(dimethylcarbamoyl)-2-(4-fluorophenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 360),
- 45 2-{4-[5-(dimethylcarbamoyl)-2-(3-fluorophenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 361),
  - 2-{4-[2-(5-chlorothiophen-2-yl)-5-(dimethylcarbamoyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 362),
  - 2-{4-[2-bromo-5-(5-methyloxazol-2-yl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 363),
  - 2-{4-[2-bromo-5-(5-methylthiazol-2-yl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 364),
  - 2-{4-[2-(4-chlorophenyl)-5-(5-methyloxazol-2-yl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 365),
- <sup>55</sup> 2-{4-[2-(4-chlorophenyl)-5-(5-methylthiazol-2-yl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 366),
  - 2-{4-[2-(4-chlorophenyl)-5-tetrazol-5-ylbenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 367),

- $\hbox{$2-\{4-[5-chloro-2-(4-cyanophenyl)benzyloxy]phenyl\}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 368),}$
- 2-{4-[5-chloro-2-(4-tetrazol-5-ylphenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 369),
- 2-{4-[2-(4-chlorophenyl)-5-{2-(4-hydroxypiperidin-1-yl)ethoxy}benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 370),

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- 2-{4-[2-(4-chlorophenyl)-5-(2-oxopiperidin-1-yl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 371),
- 2-{4-[3-(4-chlorophenyl)-5-(dimethylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 372).
  - 2-{4-[2-(4-chlorophenyl)-5-(N-hydroxyamidino)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxy-lic acid dihydrochloride (Example 373),
- 2-{4-[2-(4-chlorophenyl)-5-(2,5-dihydro-5-oxo-4H-1,2,4-oxadiazol-3-yl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 374),
- 2-{4-[2-(4-chlorophenyl)-5-(2-oxo-3H-1,2,3,5-oxathiadiazol-4-yl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimi-dazole-5-carboxylic acid hydrochloride (Example 375),
  - $2-\{4-[2-(4-chlorophenyl)-5-(2,5-dihydro-5-oxo-4H-1,2,4-thiadiazol-3-yl)benzyloxy]-2-fluorophenyl\}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 376),$
  - 2-{4-[2-(4-chlorophenyl)-5-(cyclopropylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 377),
  - 2-{4-[2-(4-chlorophenyl)-5-(cyclobutylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 378),
  - 2-{4-[2-(4-chlorophenyl)-5-(tert-butylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 379),
- 25 2-{4-[2-(4-chlorophenyl)-5-(isobutylcarbamoyl)benzyloxy}-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxy-lic acid hydrochloride (Example 380),
  - 2-{4-[2-(4-chlorophenyl)-5-{(1-hydroxypropan-2-yl)carbamoyl}-benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 381),
- 2-{4-[2-(4-chlorophenyl)-5-(methoxycarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 382),
  - 2-{4-[2-(4-chlorophenyl)-5-{(2, 3-dihydroxypropyl) carbamoyl}benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimida-zole-5-carboxylic acid hydrochloride (Example 383).
  - 2-{4-[2-(4-chlorophenyl)-5-(N-ethyl-N-methylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxvlic acid hydrochloride (Example 384).
- 2-{4-[2-(4-chlorophenyl)-5-(N-methyl-N-propylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 385),
  - 2-{4-[2-(4-chlorophenyl)-5-(N-isopropyl-N-methylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimida-zole-5-carboxylic acid hydrochloride (Example 386),
  - 2-{4-[2-(4-chlorophenyl)-5-(2,6-dimethylpiperidin-1-ylcarbonyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 387),
  - 2-{4-[5-(butylcarbamoyl)-2-(4-chlorophenyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 388),
  - 2-{4-[2-(4-chlorophenyl)-5-(propylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 389),
- 2-{4-[2-(4-chlorophenyl)-5-(ethylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 390),
  - 2-{4-[2-(4-chlorophenyl)-5-{(dimethylcarbamoyl)amino}benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 391),
  - 2-{4-[2-(4-chlorophenyl)-5-{(morpholinocarbonyl)amino}benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 392),
    - 2-{4-[2-(4-chlorophenyl)-5-ureidobenzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 393),
    - 2-{4-[2-(4-chlorophenyl)-5-{(ethylcarbamoyl)amino}benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 394),
- 2-{4-[2-(4-chlorophenyl)-5-{(isopropylcarbamoyl)amino}benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 395),
  - 2-{4-[2-(3,4-difluorophenyl)-5-(isopropylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 396),

- 2-{4-[2-(2,4-difluorophenyl)-5-(isopropylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 397),
- 2-{4-[2-(3,5-dichlorophenyl)-5-(isopropylcarbamoyl)benzyloxy}-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 398),
- 5 2-{4-[2-(3-chloro-4-fluorophenyl)-5-(isopropylcarbamoyl)-benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 399),
  - 2-{4-[2-(3,4-dichlorophenyl)-5-(isopropylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 400),
  - 2-{4-[2-(4-chloro-2-fluorophenyl)-5-(isopropylcarbamoyl)-benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 401),
  - 2-{4-[2-(4-chloro-2-fluorophenyl)-5-(pyrrolidin-1-ylcarbonyl)-benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 402),
  - 2-{4-[2-(4-chloro-3-fluorophenyl)-5-(pyrrolidin-1-ylcarbonyl)-benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimida-zole-5-carboxylic acid hydrochloride (Example 403),
- 2-{4-[2-(4-chloro-3-fluorophenyl)-5-(isopropylcarbamoyl)-benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 404),
  - 2-{4-[2-{4- (methylthio)phenyl}-5-(2-oxopyrrolidin-1-yl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 405),
  - 2-{4-[2-{4-(methylthio)phenyl}-5-(isopropylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-
- 5-carboxylic acid hydrochloride (Example 406),
  2-{4-[4-chloro-2-(4-chlorophenyl)-5-(1,1-dioxoisothiazolidin-2-yl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimi-

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- dazole-5-carboxylic acid hydrochloride (Example 407),
- 2-{4-[4-chloro-2-(4-chlorophenyl)-5-(2-oxopyrrolidin-1-yl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 408),
- <sup>25</sup> 2-{4-[2-(4-chlorophenyl)-5-(isopropylaminosulfonyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-car-boxylic acid hydrochloride (Example 409),
  - 2-{4-[2-(4-chlorophenyl)-5-(dimethylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclopentylbenzimidazole-5-car-boxylic acid hydrochloride (Example 410),
  - 2-{4-[2-(4-chlorophenyl)-5-(4-hydroxypiperidin-1-ylcarbonyl)benzyloxy]-2-fluorophenyl}-1-cyclopentylbenzimidazole-5-carboxylic acid hydrochloride (Example 411),
  - 2-{4-[2-(4-chlorophenyl)-5-(isopropylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclopentylbenzimidazole-5-carboxylic acid hydrochloride (Example 412),
  - 2-{4-[2-(4-chlorophenyl)-5-(isopropylcarbamoyl)benzyloxy]phenyl}-1-cyclopentylbenzimidazole-5-carboxylic acid hydrochloride (Example 413),
- <sup>35</sup> 2-{4-[2-(4-chlorophenyl)-5-(dimethylcarbamoyl)benzyloxy]phenyl}-1-cyclopentylbenzimidazole-5-carboxylic acid hydrochloride (Example 414),
  - 2-{4-[2-(4-chlorophenyl)-5-(4-hydroxypiperidin-1-ylcarbonyl)benzyloxy]phenyl}-1-cyclopentylbenzimidazole-5-carboxylic acid hydrochloride (Example 415),
  - 2-{4-[2-(4-chlorophenyl)-5-(isopropylcarbamoyl)benzyloxy]phenyl}-1-(tetrahydrothiopyran-4-yl)benzimidazole-5-carboxylic acid hydrochloride (Example 416),
  - 2-{4-[2-(4-chlorophenyl)-5-(pyrrolidin-1-ylcarbonyl)benzyloxy]phenyl}-1-(tetrahydrothiopyran-4-yl)benzimidazole-5-carboxylic acid hydrochloride (Example 417).
  - 2-{4-[2-(4-chlorophenyl)-5-(isopropylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-(tetrahydrothiopyran-4-yl)benzimidazole-5-carboxylic acid hydrochloride (Example 418),
- 45 2-{4-[2-(4-chlorophenyl)-5-(2-oxopyrrolidin-1-yl)benzyloxy]-2-fluorophenyl}-1-(tetrahydrothiopyran-4-yl)benzimidazole-5-carboxylic acid hydrochloride (Example 419),
  - 2-{4-[2-(4-chlorophenyl)-5-(isopropylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-piperidinobenzimidazole-5-carboxylic acid hydrochloride (Example 420),
  - 2-{4-[2-(4-chlorophenyl)-5-(pyrrolidin-1-ylcarbonyl)benzyloxy]-2-fluorophenyl}-1-piperidinobenzimidazole-5-carboxylic acid (Example 421),
  - 2-{4-[2-(4-chlorophenyl)-5-(2-imidazolin-2-yl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid dihydrochloride (Example 422),
  - 2-{4-[2-(4-chlorophenyl)-5-(2-oxooxazolidin-3-yl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 423),
- <sup>55</sup> 2-{4-[2-(4-chlorophenyl)-5-(2-oxoimidazolidin-1-yl)benzyloxyl-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-car-boxylic acid hydrochloride (Example 424),
  - 2-{4-[2-(4-chlorophenyl)-5-(2-oxazolin-2-ylamino)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-car-boxylic acid dihydrochloride (Example 425),

- 2-{4- [{2- [{(dimethylcarbamoyl) methoxy}methyl]-4-(4-fluorophenyl)thiazol-5-yl}methoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 426),
- 2-{4-[{4-(4-fluorophenyl)-2-(4-hydroxypiperidin-1-ylmethyl)thiazol-5-yl}methoxy]phenyl}-1-cyclohexylbenzimida-zole-5-carboxylic acid dihydrochloride (Example 427),
- 2-{4-[{4-(4-fluorophenyl)-2-[(carbamoylmethoxy)methyl]thiazol-5-yl}methoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 428),
  - 2-{4-[{4-(4-fluorophenyl)-2-(methylcarbamoyl)thiazol-5-yl}methoxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 429),
  - 2-{4-[{4-(4-fluorophenyl)-2-{(2-hydroxyethyl)carbamoyl}thiazol-5-yl}methoxy]-2-fluorophenyl}-1-cyclohexylbenz-imidazole-5-carboxylic acid hydrochloride (Example 430).

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- 2-{4-[{2-(4-fluorophenyl)-5-(dimethylcarbamoyl)thiophen-3-yl}methoxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 431),
- 2-{4-[{2-(4-fluorophenyl)-5-(isopropylcarbamoyl)thiophen-3-yl}methoxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 432),
- 2-{4-[{2-(4-fluorophenyl)-5-(4-hydroxypiperidin-1-ylcarbonyl)thiophen-3-yl}methoxy]-2-fluorophenyl}-1-cyclohex-ylbenzimidazole-5-carboxylic acid hydrochloride (Example 433),
  - 2-{4-[2-(4-chlorophenyl)-5-(dimethylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexyl-5-tetrazol-5-ylbenzimidazole (Example 434),
  - 2-{4-[2-(4-carboxyphenyl)-5-chlorobenzyloxy]-2-fluorophenyl}-1-cyclohexyl-5-tetrazol-5-ylbenzimidazole hydrochloride (Example 435),
    - 2-{4-[2-(4-chlorophenyl)-5-(isopropylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexyl-5-(2,5-dihydro-5-oxo-4H-1,2,4-oxadiazol-3-yl)benzimidazole hydrochloride (Example 436),
    - 2-{4-[5-carboxy-2-(4-chlorophenyl)benzyloxy]-2-fluorophenyl}-5-cyano-1-cyclohexylbenzimidazole (Example 437),
- 2-5 2-{4-[2-(4-chlorophenyl)-5-(dimethylcarbamoyl)benzyloxy]-2-fluorophenyl}-5-cyano-1-cyclohexylbenzimidazole (Example 438),
  - 2-{4-[{N-(4-dimethylcarbamoyl)-N-(4-fluorophenyl)amino}methyl]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 439),
  - 2-{5-[bis(3-fluorophenyl)methyl]-2-fluoro-4-hydroxyphenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 440),
  - $\hbox{$2-\{3-[bis(3-fluorophenyl)methyl]-2-fluoro-4-hydroxyphenyl\}-1-cyclohexylbenzimidazole-5-carboxylic\ acid\ (Example\ 441),}$
  - 2-{4-[(3-dimethylcarbamoylphenyl)(4-fluorophenyl)methoxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 442),
- 2-{4-[{3-(4-hydroxypiperidyl-1-ylcarbonyl)phenyl}(4-fluorophenyl)methoxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 443),
  - $1-\{[2-\{4-([4-(4-fluorophenyl]-2-methylthiazol-5-yl]methoxy)phenyl\}-1-cyclohexylbenzimidazol-5-yl]carbonyl]-\beta-D-glucuronic acid (Example 444),$
  - $[2-\{4-[bis(3-fluorophenyl]-2-fluorophenyl]-1-cyclohexylbenzimidazol-5-yl]carbonyl]-\beta-D-glucuronic acid (Example 445),$
  - 2-{4-[2-(4-chlorophenyl)-5-(1,1-dioxoisothiazolidin-2-yl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 446),
  - 3-{[4-(5-aminosulfonyl-1-cyclohexylbenzimidazol-2-yl)-3-fluorophenoxy]methyl}-4-(4-chlorophenyl)-N-isopropylbenzamide (Example 447),
- 2-[4-{2-(4-chlorophenyl)-6-(isopropylaminocarbonyl)benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 448),
  - 2-[4-{2-(4-chlorophenyl)-4-fluoro-5-(1,1-dioxoisothiazolidin-2-yl)benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 449),
  - 2-[4-{2-(4-chlorophenyl)-5-(isopropylaminocarbonyl)benzyloxy}-2-fluorophenyl]-1-cyclohexyl-4-methoxybenzimi-dazole-5-carboxylic acid hydrochloride (Example 450),
    - 2-[4-{2-(4-chlorophenyl)-5-(N-isopropylcarbonyl-N-methylamino)benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 451).
    - 2-[4-{2-(4-chlorophenyl)-5-(isopropylcarbonylamino)benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 452),
- 2-[3-{[4-(4-fluorophenyl)-2-methylthiazol-5-yl]methyl}-4-hydroxyphenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 453),
  - 2-[4-{2-(4-chlorophenyl)-4-fluoro-5-(2-oxopyrrolidin-1-yl)benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 454),

- 2-[4-{2-(4-chlorophenyl)-5-(methylsulfonylamino)benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-car-boxylic acid hydrochloride (Example 455),
- 2-[4-{2-(4-chlorophenyl)-5-[N-methyl-N-(methylsulfonyl)amino]benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 456),
- 5 2-[4-{[3-(4-chlorophenyl)-6-(2-oxopyrrolidin-1-yl)pyridin-2-yl]methyloxy}-2-fluorophenyl]-1-cyclohexylbenzimida-zole-5-carboxylic acid hydrochloride (Example 457),
  - 2-[4-{2-(4-chlorophenyl)-5-(acetylamino)benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 458),
  - 2-[4-{2-(4-chlorophenyl)-5-(N-acetyl-N-ethylamino)benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-car-boxylic acid hydrochloride (Example 459),
  - 2-[4-{2-(4-chlorophenyl)-5-(N-acetyl-N-propylamino)benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 460),
  - 2-[4-{2-(4-chlorophenyl)-5-[N-ethyl-N-(methylsulfonyl)amino]benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 461),
- 2-[4-{2-(4-chlorophenyl)-5-[N-(methylsulfonyl)-N-propylamino]benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 462),
  - 2-[4-{2-(4-chlorophenyl)-5-(N-acetyl-N-methylamino)benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 463),
  - 2-[4-{2-(4-chlorophenyl)-5-[N-(ethylsulfonyl)-N-methylamino]benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimida-zole-5-carboxylic acid hydrochloride (Example 464),
  - 2-[4-{2-(4-chlorophenyl)-5-[N-ethyl-N-(ethylsulfonyl)amino]benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 465),
  - 2-[4-(2-(4-chlorophenyl)-5-[N-(ethylcarbonyl)-N-methylamino]benzyloxy}-2-f-luorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 466),
- 2-[4-{2-(4-chlorophenyl)-5-[N-ethyl-N-(ethylcarbonyl)amino]-benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 467),
  - 2-[4-{2-(4-chlorophenyl)-5-methoxybenzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid (Example 468),
  - 2-[4-{2-(4-chlorophenyl)-5-(N-acetyl-N-isopropylamino)-benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride (Example 469),
  - {[2-{4-[2-(4-chlorophenyl)-5-(2-oxopyrrolidin-1-yl)benzyloxy]-2-fluorophehyl}-1-cyclohexylbenzoimidazol-5-yl]carbonyl}-β-D-glucuronic acid (Example 470),
  - 2-{4-[2-(4-chlorophenyl)-5-(isopropylcarbamoyl)benzyloxy]phenyl}-3-cyclohexyl-3H-imidazo[4,5-b]pyridine-6-carboxylic acid hydrochloride (Example 702), and
- <sup>35</sup> 2-{4-[2-(4-chlorophenyl)-5-(pyrrolidin-1-ylcarbonyl)benzyloxy]-phenyl}-3-cyclohexyl-3H-imidazo[4,5-b]pyridine-6-carboxylic acid hydrochloride (Example 703).
  - (63) A pharmaceutical composition comprising a fused ring compound of any of (29) to (62) above, or a pharmaceutically acceptable salt thereof, and a pharmaceutically acceptable carrier.
  - (64) A hepatitis C virus polymerase inhibitor comprising a fused ring compound of any of (1) to (28) and (29) to (62) above, or a pharmaceutically acceptable salt thereof, and a pharmaceutically acceptable carrier.
  - (65) An anti-hepatitis C virus agent comprising a fused ring compound of any of (1) to (28) and (29) to (62) above, or a pharmaceutically acceptable salt thereof, and a pharmaceutically acceptable carrier.
  - (66) A therapeutic agent for hepatitis C comprising a fused ring compound of any of (29) to (62) above, or a pharmaceutically acceptable salt thereof, and a pharmaceutically acceptable carrier.
  - (67) An anti-hepatitis C virus agent comprising (a) the anti-hepatitis C virus agent of (65) above and (b) at least one agent selected from the group consisting of a different antiviral agent, an antiinflammatory agent and an immunostimulant.
    - (68) An anti-hepatitis C virus agent comprising (a) the anti-hepatitis C virus agent of (65) above and (b) interferon.
    - (69) A therapeutic agent for hepatitis C comprising (a) the hepatitis C virus polymerase inhibitor of (64) above and (b) at least one agent selected from the group consisting of a different antiviral agent, an antiinflammatory agent and an immunostimulant.
    - (70) A therapeutic agent for hepatitis C comprising (a) the hepatitis C virus polymerase inhibitor of (64) above and (b) interferon.
    - (71) A benzimidazole compound of the following formula [III]

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$$R^{a36}O$$
 $N$ 
 $R^{a37}$ 
 $R^{a38}$ 

OH [111]

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- wherein R<sup>a36</sup> is hydrogen atom or carboxyl-protecting group, R<sup>a37</sup> is cyclopentyl or cyclohexyl, and R<sup>a38</sup> is hydrogen atom or fluorine atom, or a salt thereof.
  - (72) A thiazole compound selected from the group consisting of 4-(4-fluorophenyl)-5-hydroxymethyl-2-methylthiazole and 4-(4-fluorophenyl)-5-chloromethyl-2-methylthiazole, or a pharmaceutically acceptable salt thereof.
- (73) A biphenyl compound selected from the group consisting of 1-(4'-chloro-2-hydroxymethyl-biphenyl-4-yl)-2-pyrrolidinone and 1-(4'-chloro-2-chloromethyl-biphenyl-4-yl)-2-pyrrolidinone, or a pharmaceutically acceptable salt thereof.
  - (74) A pharmaceutical composition comprising (a) a fused ring compound of the formula [I] of (1) above or a pharmaceutically acceptable salt thereof and (b) at least one agent selected from the group consisting of an antiviral agent other than the compound of (1) above, an antiinflammatory agent and an immunostimulant.
- (75) A pharmaceutical composition comprising (a) a fused ring compound of the formula [I] of (1) above or a pharmaceutically acceptable salt thereof and (b) interferon.
  - (76) A method for treating hepatitis C, which comprises administering an effective amount of a fused ring compound of the formula [I] of (1) above or a pharmaceutically acceptable salt thereof.
  - (77) The method of (76) above, further comprising administering an effective amount of at least one agent selected from the group consisting of an antiviral agent other than the compound of (1) above, an antiinflammatory agent and an immunostimulant.
    - (78) The method of (76) above, further comprising administering an effective amount of interferon.
    - (79) A method for inhibiting hepatitis C virus polymerase, which comprises administering an effective amount of a fused ring compound of the formula [I] of (1) above or a pharmaceutically acceptable salt thereof.
  - (80) The method of (79) above, further comprising administering an effective amount of at least one agent selected from the group consisting of an antiviral agent other than the compound of (1) above, an antiinflammatory agent and an immunostimulant.
    - (81) The method of (79) above, further comprising administering an effective amount of interferon.
    - (82) Use of a fused ring compound of the formula [I] of (1) above or a pharmaceutically acceptable salt thereof for the production of a pharmaceutical agent for treating hepatitis C.
    - (83) Use of a fused ring compound of the formula [I] of (1) above or a pharmaceutically acceptable salt thereof for the production of a hepatitis C virus polymerase inhibitor.
    - (84) A pharmaceutical composition for the treatment of hepatitis C, which comprises a fused ring compound of the formula [I] of (1) above or a pharmaceutically acceptable salt thereof, and a pharmaceutically acceptable carrier.
    - (85) A pharmaceutical composition for inhibiting hepatitis C virus polymerase, which comprises a fused ring compound of the formula [I] of (1) above or a pharmaceutically acceptable salt thereof, and a pharmaceutically acceptable carrier.
    - (86) A commercial package comprising a pharmaceutical composition of (84) above and a written matter associated therewith, the written matter stating that the pharmaceutical composition can or should be used for treating hepatitis C.
    - (87) A commercial package comprising a pharmaceutical composition of (85) above and a written matter associated therewith, the written matter stating that the pharmaceutical composition can or should be used for inhibiting hepatitis C virus polymerase.
- 50 [0038] The definitions of respective substituents and moieties used in the present specification are as follows.
  - [0039] The halogen atom is a fluorine atom, chlorine atom, bromine atom or iodine atom, preferably fluorine atom, chlorine atom or bromine atom.
  - [0040] Particularly preferably, the halogen atom is fluorine atom at  $R^5$ ,  $R^6$ ,  $R^6$ , group A and group C, and fluorine atom or chlorine atom at X, Z, Z', group B and group D.
- [0041] The C<sub>1-6</sub> alkyl is straight chain or branched chain alkyl having 1 to 6 carbon atoms, and is exemplified by methyl, ethyl, propyl, isopropyl, butyl, isobutyl, sec-butyl, tert-butyl, pentyl, isopentyl, tert-pentyl, hexyl and the like.
  [0042] Preferably, it is straight chain or branched chain alkyl having 1 to 4 carbon atoms, and is particularly preferably methyl at R<sup>a7</sup>, R<sup>a8</sup>, R<sup>a9</sup>, R<sup>a15</sup>, R<sup>a16</sup>, R<sup>a17</sup>, R<sup>a33</sup>, R<sup>a35</sup>, R<sup>b6</sup> and R<sup>b7</sup> and methyl or tert-butyl at R<sup>b1</sup>, R<sup>b2</sup>, group B and

group C, and methyl, ethyl, propyl or isopropyl at Ra29.

[0043] The halogenated C<sub>1-6</sub> alkyl is the above-defined C<sub>1-6</sub> alkyl except that it is substituted by the above-defined halogen atom. Preferably, it is halogenated alkyl wherein the alkyl moiety thereof is straight chain or branched chain alkyl having 1 to 4 carbon atoms. Examples thereof include fluoromethyl, difluoromethyl, trifluoromethyl, bromomethyl, chloromethyl, 1,2-dichloromethyl, 2,2-dichloromethyl, 2,2,2-trifluoroethyl and the like.

[0044] The halogenated C<sub>1-6</sub> alkyl is particularly preferably trifluoromethyl at group B.

[0045] The  $C_{1-6}$  alkylene is straight chain alkylene having 1 to 6 carbon atoms, and is exemplified by methylene, ethylene, trimethylene, tetramethylene, pentamethylene or hexamethylene.

[0046] The C<sub>1-6</sub> alkylene is preferably methylene or ethylene at Y.

[0047] The C<sub>2-6</sub> alkenylene is straight chain alkenylene having 2. to 6 carbon atoms, and is exemplified by vinylene, propenylene, 1-butenylene, 1,3-butadienylene and the like.

[0048] The  $C_{2-6}$  alkenylene is preferably vinylene at Y.

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[0049] The  $C_{1-6}$  alkoxy is alkyloxy wherein the alkyl moiety thereof is the above-defined  $C_{1-6}$  alkyl. Preferably, it is alkoxy wherein the alkyl moiety thereof is straight chain or branched chain alkyl having 1 to 4 carbon atoms. Examples thereof include methoxy, ethoxy, propoxy, isopropyloxy, butoxy, isobutyloxy, tert-butyloxy, pentyloxy, hexyloxy and the

[0050] The C<sub>1-6</sub> alkoxy is particularly preferably methoxy at Ra2, Ra3, Ra27, Ra28, Ra33, group A and group C.

[0051] The  $C_{1-6}$  alkoxy is that wherein  $C_{1-6}$  alkoxy in the above definition is substituted by  $C_{1-6}$  alkoxy defined above and is preferably that wherein the alkyl moiety thereof is straight chain or branched chain alkyl having 1 to 4 carbon atoms. Specific examples include methoxymethyl, ethoxymethyl, methoxyethoxy, methoxypropoxy, isopropyloxyethoxy and the like.

[0052] The group A is particularly preferably methoxyethoxy.

**[0053]** The  $C_{1-6}$  alkanoyl is alkylcarbonyl wherein the alkyl moiety thereof is the above-defined  $C_{1-6}$  alkyl. Preferably, it is alkanoyl wherein the alkyl moiety thereof is straight chain or branched chain alkyl having 1 to 4 carbon atoms. Examples thereof include acetyl, propionyl, butyryl, isobutyryl, pivaloyl and the like.

[0054] The C<sub>1-6</sub> alkanoyl is particularly preferably acetyl at R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, R<sup>4</sup>, R<sup>a5</sup>, R<sup>a29</sup>, R<sup>b7</sup> and group B.

[0055] The  $C_{1-6}$  alkoxycarbonyl is alkyloxycarbonyl wherein the alkoxy moiety thereof is the above-defined  $C_{1-6}$  alkoxy. Preferably, it is alkoxycarbonyl wherein the alkyl moiety thereof is straight chain or branched chain alkyl having 1 to 4 carbon atoms. Examples thereof include methoxycarbonyl, ethoxycarbonyl, propoxycarbonyl, isopropyloxycarbonyl, butoxycarbonyl, isobutyloxycarbonyl, tert-butyloxycarbonyl, pentyloxycarbonyl, hexyloxycarbonyl and the like.

 $\hbox{[0056]} \quad \text{The $C_{1-6}$ alkoxycarbonyl is particularly preferably methoxycarbonyl or ethoxycarbonyl at $R^{a10}$ and group $A$.}$ 

[0057] The  $C_{1-6}$  alkylamino is alkylamino or dialkylamino wherein the alkyl moiety thereof is the above-defined  $C_{1-6}$  alkyl. Preferably, it is alkylamino or dialkylamino wherein the alkyl moiety thereof is straight chain or branched chain alkyl having 1 to 4 carbon atoms. Examples thereof include methylamino, ethylamino, propylamino, isopropylamino, butylamino, tert-butylamino, pentylamino, dimethylamino, diethylamino, methylamino, methylamino,

N-isopropyl-N-isobutylamino and the like.

[0058] The C<sub>1-6</sub> alkylamino is particularly preferably methylamino at R<sup>a7</sup>, and particularly preferably dimethylamino at R<sup>a21</sup> and group A, and particularly preferably dimethylamino, ethylamino or isopropylamino at R<sup>a24</sup>.

[0059] The  $C_{1-6}$  alkanoylamino is alkylcarbonylamino wherein the alkanoyl moiety thereof is the above-defined  $C_{1-6}$  alkanoyl. Preferably, it is alkylcarbonylamino wherein the alkyl moiety thereof is straight chain or branched chain alkyl having 1 to 4 carbon atoms. Examples thereof include acetylamino, propionylamino, butyrylamino, isobutyrylamino, pivaloylamino and the like.

[0060] The C<sub>1-6</sub> alkanoylamino is particularly preferably acetylamino at X and Ra10.

[0061] The C<sub>1-6</sub> alkylsulfonyl is alkylsulfonyl wherein the alkyl moiety thereof is the above-defined C<sub>1-6</sub> alkyl. Preferably, it is alkylsulfonyl wherein the alkyl moiety thereof is straight chain or branched chain alkyl having 1 to 4 carbon atoms. Examples thereof include methylsulfonyl, ethylsulfonyl, propylsulfonyl, isopropylsulfonyl, butylsulfonyl, isobutylsulfonyl, tert-butylsulfonyl, pentylsulfonyl, hexylsulfonyl and the like.

[0062] The C<sub>1-6</sub> alkylsulfonyl is particularly preferably methylsulfonyl at X and Ra5.

[0063] The  $C_{6.14}$  aryl is aromatic hydrocarbon having 6 to 14 carbon atoms. Examples thereof include phenyl, naphthyl, anthryl, indenyl, azulenyl, fluorenyl, phenanthryl and the like.

[0064] The C<sub>6-14</sub> aryl is preferably phenyl or naphthyl, particularly preferably phenyl at the ring A, ring B and ring B'.

[0065] The C<sub>3-8</sub> cycloalkyl is saturated cycloalkyl having 3 to 8, preferably 5 to 7, carbon atoms. Examples thereof include cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, cycloheptyl and cyclooctyl.

[0066] The C<sub>3-8</sub> cycloalkyl is particularly preferably cyclohexyl at the ring A, ring A', ring B and ring B'.

[0067] The C<sub>3-8</sub> cycloalkenyl is cycloalkenyl having 3 to 8, preferably 5 to 7, carbon atoms and has at least 1, preferably 1 or 2, double bond(s). Examples thereof include cyclopropenyl, cyclobutenyl, cyclopentenyl, cyclopentadienyl, cyclohexenyl, 2,4-cyclohexadien-1-yl, 2,5-cyclohexadien-1-yl, cycloheptenyl and cyclooctenyl and the like, but do not

include aryl (e.g., phenyl) or completely saturated cycloalkyl.

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[0068] The  $C_{3-8}$  cycloalkenyl is preferably cyclohexenyl at the ring A and ring A'.

[0069] The heterocyclic group has, as an atom constituting the ring, 1 to 4 heteroatom(s) selected from an oxygen atom, a nitrogen atom and a sulfur atom, besides a carbon atom, and includes saturated ring and unsaturated ring, monocyclic ring and fused ring having the number of ring atom constituting the ring of 3 to 14.

[0070] The heterocyclic group as a monocyclic ring includes, for example, pyridyl, pyrazinyl, pyrimidinyl, pyridazinyl, 1,3,5-triazinyl, pyrrolyl, pyrazolyl, imidazolyl, 1,2,4-triazolyl, tetrazolyl, thienyl, furyl, oxazolyl, isoxazolyl, thiazolyl, imidazolyl, pyrrolinyl, pyrrolidinyl, imidazolidinyl, piperidyl, piperazinyl, morpholinyl, thiomorpholinyl, tetrahydropyranyl and the like.

[0071] The heterocyclic group includes the groups of the following formulas.

wherein E¹ is an oxygen atom, a sulfur atom or N(-Ra³5), E² is an oxygen atom, CH₂ or N(-Ra³5), E³ is an oxygen atom or a sulfur atom, wherein Ra³5 is independently hydrogen atom or C₁-6 alkyl, f is an integer of 1 to 3, and h and h' are the same or different and each is an integer of 1 to 3.

[0072] Specific examples of the heterocyclic group include

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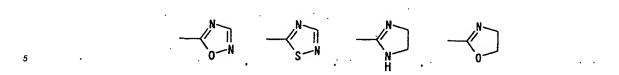
and the like

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[0073] Examples of the heterocyclic group as a fused ring include quinolyl, isoquinolyl, quinazolinyl, quinaxalyl, phthalazinyl, cinnolinyl, naphthyridinyl, 5,6,7,8-tetrahydroquinolyl, indolyl, benzimidazolyl, 2,3-dihydrobenzimidazolyl, 2,3-dihydro-2-oxobenzimidazolyl, indolinyl, benzofuranyl, benzothienyl, benzoxazolyl, benzothiazolyl and the like.

[0074] Preferably, it is a heterocyclic group which is a 5-membered or a 6-membered monocyclic group. Examples thereof include pyridyl, pyrazinyl, pyrimidinyl, pyridazinyl, 1,3,5-triazinyl, pyrrolyl, pyrazolyl, imidazolyl, 1,2,4-triazolyl, tetrazolyl, thienyl, furyl, oxazolyl, isoxazolyl, thiazolyl, isothiazolyl, thiadiazolyl, pyrrolidinyl, piperidyl, piperazinyl

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$$\frac{1}{10}$$
  $\frac{1}{10}$   $\frac{1}{10$ 



and the like.

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[0075] At R¹, R², R³, R⁴, Z and group D, tetrazolyl and 5-oxo-Δ²-1,2,4-oxadiazolin-3-yl are particularly preferable.
 [0076] The heterocyclic group is preferably pyridyl, pyrazinyl, pyrimidinyl or pyridazinyl which is an aromatic group,

and particularly preferably pyridyl at the ring A and ring A'.

[0077] The heterocyclic group is particularly preferably pyridyl, pyrazinyl, pyrimidinyl, pyridazinyl, 1,3,5-triazinyl, pyrrolyl, pyrazolyl, imidazolyl, 1,2,4-triazolyl, tetrazolyl, thienyl, furyl, oxazolyl, isoxazolyl, thiazolyl, isothiazolyl or thiadiazolyl, which is an aromatic group; at the ring B and ring B'. More preferably it is pyridyl or thiazolyl, most preferably thiazolyl.

[0078] The  $C_{6-14}$  aryl  $C_{1-6}$  alkyl is arylalkyl wherein the alkyl moiety thereof is the above-defined  $C_{1-6}$  alkyl and the aryl moiety is the above-defined  $C_{6-14}$  aryl. Preferably, it is arylalkyl wherein the alkyl moiety thereof is straight chain alkyl having 1 to 4 carbon atoms and the aryl moiety is phenyl. Examples thereof include benzyl, phenethyl, 3-phenyl-propyl, 2-phenylpropyl, 4-phenylbutyl and the like.

[0079] The C<sub>6-14</sub> aryl C<sub>1-6</sub> alkyl is particularly preferably benzyl at R<sup>a8</sup> and R<sup>b6</sup>.

[0080] The glucuronic acid residue is glucuronic acid less any hydroxyl group, preferably  $\beta$ -D-glucuronic acid substituted at 1-position.

[0081] The  $C_{6-14}$  aryl  $C_{1-6}$  alkyloxycarbonyl is arylalkyloxycarbonyl wherein the  $C_{6-14}$  aryl  $C_{1-6}$  alkyl moiety thereof is the above-defined  $C_{6-14}$  aryl  $C_{1-6}$  alkyl. Preferably, it is arylalkyloxycarbonyl wherein the alkyl moiety thereof is straight chain alkyl having 1 to 4 carbon atoms and the aryl moiety is phenyl. Examples thereof include benzyloxycarbonyl, phenethyloxycarbonyl, 3-phenylpropyloxycarbonyl, 2-phenylpropyloxycarbonyl, 4-phenylbutyloxycarbonyl and the like. [0082] The  $C_{6-14}$  aryl  $C_{1-6}$  alkyloxycarbonyl is particularly preferably benzyloxycarbonyl at  $R^{57}$ .

[0083] The optionally substituted  $C_{1-6}$  alkyl is the above-defined  $C_{1-6}$  alkyl, preferably that wherein straight chain or branched chain alkyl having 1 to 4 carbon atoms is optionally substituted with 1 to 3 substituent(s), and includes unsubstituted alkyl. The substituent(s) is(are) selected from the above-defined halogen atom, hydroxyl group, carboxyl, amino, the above-defined  $C_{1-6}$  alkoxy, the above-defined  $C_{1-6}$  alkoxy, the above-defined  $C_{1-6}$  alkoxy, the above-defined  $C_{1-6}$  alkylamino. Examples of optionally substituted  $C_{1-6}$  alkyl include methyl, ethyl, propyl, isopropyl, butyl, isobutyl, sec-butyl, tert-butyl, pentyl, isopentyl, tert-pentyl, neopentyl, 1-ethylpropyl, hexyl, trifluoromethyl, hydroxymethyl, 2-hydroxyethyl, 3-hydroxypropyl, 4-hydroxybutyl, 1-hydroxy-1-methylethyl, 1-hydroxypropan-2-yl, 1,3-dihydroxypropan-2-yl, 1-hydroxy-2-methylpropan-2-yl, carboxylmethyl, 2-carboxylethyl, methoxymethyl, methoxyethyl, ethoxycarbonylmethyl, 2-ethoxycarbonylethyl, 2-dimethylaminoethyl and the like.

[0084] Preferably, the optionally substituted C<sub>1-6</sub> alkyl is methyl, 1-hydroxy-1-methylethyl, carboxylmethyl or 2-dimethylaminoethyl at R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup> and R<sup>4</sup>, methyl or trifluoromethyl at R<sup>5</sup>, R<sup>5</sup>, R<sup>6</sup> and R<sup>6</sup>, methyl at R<sup>7</sup>, R<sup>8</sup>, R<sup>a31</sup> and R<sup>b5</sup>, methyl, ethyl or isopropyl at R<sup>a24</sup>, methyl or isopropyl at R<sup>a18</sup>, methyl or ethyl at R<sup>a1</sup>, R<sup>a19</sup> and R<sup>a25</sup>, methyl, carboxylmethyl or 2-dimethylaminoethyl at R<sup>a2</sup> and R<sup>a3</sup>, methyl or carboxylmethyl at R<sup>a6</sup>, methyl, ethyl, isopropyl, butyl or trifluoromethyl at X, methyl, ethyl, isopropyl, butyl, isobutyl, tert-butyl, isopentyl, neopentyl, 1-ethylpropyl or carboxylmethyl at R<sup>a10</sup>, methyl, ethyl, propyl, isopropyl, butyl, isobutyl, trifluoromethyl, 2-hydroxyethyl or carboxylmethyl at R<sup>a11</sup>, methyl or 4-hydroxybutyl at R<sup>a12</sup>, methyl, ethyl, isopropyl, butyl, 2-hydroxyethyl, 4-hydroxybutyl, ethoxycarbonylmethyl, 2-(ethoxycarbonyl)ethyl or 2-dimethylaminoethyl at R<sup>a13</sup>, methyl, propyl, butyl, isopentyl, trifluoromethyl, hydroxymethyl, 2-hydroxyethyl, 3-hydroxypropyl, methoxyethyl, methoxyethoxyethyl or carboxymethyl at R<sup>a20</sup>, methyl or ethyl at R<sup>a22</sup> and R<sup>a23</sup>, methyl isopropyl or tert-butyl at R<sup>a26</sup>, methyl, ethyl, propyl, isopropyl, butyl, tert-butyl, isobutyl, 2-hydroxyethyl, 1-hydroxypropan-2-yl, 1-hydroxy-2-methylpropan-2-yl or carboxylmethyl at R<sup>a27</sup> and R<sup>a28</sup>, and methyl, ethyl, propyl, isopropyl, tert-butyl, trifluoromethyl, hydroxymethyl, 2-hydroxyethyl, 2-carboxylethyl, methoxymethyl or ethoxycarbonylmethyl at Z, Z' and group D.

[0085] It is particularly preferably, trifluoromethyl at R<sup>5</sup>, R<sup>5</sup>', R<sup>6</sup> and R<sup>6</sup>', methyl or tert-butyl at R<sup>a26</sup>, methyl, tert-butyl, trifluoromethyl or hydroxymethyl at Z, Z' and group D, and methyl at other substituents.

[0086] The optionally substituted  $C_{2-6}$  alkenyl is that wherein straight chain or branched chain alkenyl having 2 to 6 carbon atoms is optionally substituted by 1 to 3 substituent(s), and includes unsubstituted alkenyl. The substituent(s) is (are) selected from the above-defined halogen atom, hydroxyl group, carboxyl, amino, the above-defined  $C_{1-6}$  alkoxy, the above-defined  $C_{$ 

[0087] The optionally substituted C<sub>2-6</sub> alkenyl is preferably 2-carboxylethenyl at X, and preferably 2-isopentenyl,

3-isohexenyl or 4-methyl-3-pentenyl at Ra20.

[0088] The optionally substituted  $C_{2-6}$  alkynyl is that wherein straight chain or branched chain alkynyl having 2 to 6 carbon atoms is optionally substituted by 1 to 3 substituent(s), and includes unsubstituted alkynyl. The substituent(s) is(are) selected from the above-defined halogen atom, hydroxyl group, carboxyl, amino, the above-defined  $C_{1-6}$  alkoxy, the above-defined  $C_{1-6}$  alkoxycarbonyl and the above-defined  $C_{1-6}$  alkylamino. Examples thereof include ethynyl, 1-propynyl, 2-propynyl, 3-butynyl and the like.

[0089] The optionally substituted C<sub>2-6</sub> alkynyl is preferably 2-propynyl at R<sup>a20</sup>.

[0090] The  $C_{6-14}$  aryl optionally substituted by 1 to 5 substituent(s) selected from group B is that wherein the above-defined  $C_{6-14}$  aryl is optionally substituted by 1 to 5 substituent(s), and includes unsubstituted aryl. The substituent(s) is(are) selected from the above-defined halogen atom, cyano, nitro, the above-defined  $C_{1-6}$  alkyl, the above-defined halogenated  $C_{1-6}$  alkyl, the above-defined  $C_{1-6}$  alkanoyl,  $-(CH_2)_r-COOR^{b1}$ ,  $-(CH_2)_r-CONR^{b1}R^{b2}$ ,  $-(CH_2)_r-NR^{b1}R^{b2}$ ,  $-(CH_2)_r-NR^{b1}-COR^{b2}$ ,  $-(CH_2)_r-NHSO_2R^{b1}$ ,  $-(CH_2)_r-OR^{b1}$ ,  $-(CH_2)_r-SR^{b1}$ ,  $-(CH_2)_r-SO_2R^{b1}$  and  $-(CH_2)_r-SO_2NR^{b1}R^{b2}$  (wherein  $R^{b1}$  and  $R^{b2}$  are each independently hydrogen atom or the above-defined  $C_{1-6}$  alkyl and r is 0 or an integer of 1 to 6).

[0091] Examples thereof include phenyl, naphthyl, anthryl, indenyl, azulenyl, fluorenyl, phenanthryl, 3-fluorophenyl, 4-fluorophenyl, 3-chlorophenyl, 4-chlorophenyl, 2,4-dichlorophenyl, 3,5-dichlorophenyl, pentafluorophenyl, 4-methylphenyl, 4-tert-butylphenyl, 2-trifluoromethylphenyl, 4-trifluoromethylphenyl, 4-nitrophenyl, 4-cyanophenyl, 4-acetylphenyl, 4-carboxylphenyl, 4-carbamoylphenyl, 4-aminophenyl, 4-dimethylaminophenyl, 4-acetylaminophenyl, 4-(methylsulfonylphenyl, 4-methylsulfonylphenyl, 4-aminophenyl, 4-aminophenyl, 4-methylsulfonylphenyl, 4-aminophenyl, 4-aminophenyl, 4-methylsulfonylphenyl, 4-aminophenyl, 4-aminophenyl, 4-methylsulfonylphenyl, 4-aminophenyl, 4-aminophenyl, 4-aminophenyl, 4-aminophenyl, 4-aminophenyl, 4-methylsulfonylphenyl, 4-aminophenyl, 4-aminop

[0092] The aryl moiety is preferably phenyl, the group B here is preferably the above-defined halogen atom, nitro, the above-defined  $C_{1-6}$  alkyl, the above-defined halogenated  $C_{1-6}$  alkyl or -  $(CH_2)_r$ - $OR^{b1}$ . Examples of group B include fluorine atom; chlorine atom, nitro, methyl, tert-butyl, trifluoromethyl and methoxy. Particularly preferably, it is fluorine atom or chlorine atom.

[0093] With regard to "C<sub>6-14</sub> aryl optionally substituted by 1 to 5 substituent(s) selected from group B", it is preferably phenyl, 4-tert-butylphenyl, 4-fluorophenyl, 3-chlorophenyl, 4-chlorophenyl, 4-methoxyphenyl or 4-trifluoromethylphenyl at Ra<sup>12</sup>, Ra<sup>27</sup> and Ra<sup>28</sup>, phenyl at Ra<sup>14</sup>, Ra<sup>22</sup>, Ra<sup>23</sup>, Ra<sup>26</sup> and Rb<sup>5</sup>, phenyl or 3-fluorophenyl at Ra<sup>18</sup>, phenyl or 2,4-dichlorophenyl at Ra<sup>20</sup>, phenyl, 4-chlorophenyl, 4-trifluoromethylphenyl, 3,5-dichlorophenyl, 3-nitro-4-methoxyphenyl or 4-nitro-3-methoxyphenyl at Ra<sup>24</sup>, and phenyl or 4-methylphenyl at Ra<sup>25</sup>.

30 [0094] It is particularly preferably phenyl at other substituents.

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**[0095]** The  $C_{6-14}$  aryl optionally substituted by 1 to 5 substituent(s) selected from group D is that wherein the above-defined  $C_{6-14}$  aryl is optionally substituted by 1 to 5 substituent(s), and includes unsubstituted aryl. The substituent(s) is(are) selected from the above-mentioned group D (substituents shown under (a) to (q)).

[0096] Examples of group D here include fluorine atom, chlorine atom, bromine atom, nitro, cyano, methyl, ethyl, propyl, isopropyl, tert-butyl, trifluoromethyl, hydroxymethyl, 2-hydroxyethyl, methoxymethyl, 2-carboxylethyl, methoxycarbonylmethyl, ethoxycarbonylmethyl, acetyl, carboxyl, methoxycarbonyl, ethoxycarbonyl, carbamoyl, methylaminocarbonyl, isopropylaminocarbonyl, dimethylaminocarbonyl, diethylaminocarbonyl, (2-hydroxyethyl)aminocarbonyl, (carboxylmethyl)aminocarbonyl, hydroxyl group, methoxy, ethoxy, propyloxy, isopropyloxy, isopentyloxy, 2-isopentenyloxy, 3-isohexenyloxy, 4-methyl-3-pentenyloxy, 2-propynyloxy, hydroxymethyloxy, carboxylmethyloxy, (dimethylaminocarbonyl)methyloxy, amino, methylamino, dimethylamino, diethylamino, acetylamino, methylsulfonyl, methylsulfonyl, aminosulfonyl, methylaminosulfonyl, dimethylaminosulfonyl and tetrazolyl.

[0097] Examples of C<sub>6-14</sub> aryl optionally substituted by 1 to 5 substituent(s) selected from group D include phenyl, naphthyl, anthryl, indenyl, azulenyl, fluorenyl, phenanthryl, 3-fluorophenyl, 4-fluorophenyl, 3-chlorophenyl, 4-chlorophenyl, 2,4-dichlorophenyl, 3,5-dichlorophenyl, 4-bromophenyl, 4-nitrophenyl, pentafluorophenyl, 4-methylphenyl, 4-tert-butylphenyl, 2-trifluoromethylphenyl, 4-trifluoromethylphenyl, 4-(hydroxymethyl)phenyl, 4-(methoxymethyl)phenyl, 4-(2-carboxylethyl)phenyl, 3-carboxylphenyl, 4-carboxylphenyl, 4-methoxyphenyl, 3,4,5-trimethoxyphenyl, 4-carboxylphenyl, 4-methylsulfonylphenyl, 4-acetylaminophenyl, 4-cyanophenyl, 4-acetylphenyl, 4-aminophenyl, 4-dimethylaminophenyl, 4-(methylsulfonylamino)phenyl, 4-methylsulfonylphenyl, 4-aminosulfonylphenyl and 3-nitro-4-methoxyphenyl, 4-nitro-3-methoxyphenyl and 4-tetrazol-5-ylphenyl

[0098] At Z and Z', the aryl moiety is preferably phenyl.

**[0099]** The group D here is preferably the above-defined halogen atom, nitro, the above-defined optionally substituted  $C_{1-6}$  alkyl,  $-(CH_2)_t$ -COOR<sup>a19</sup>,  $-(CH_2)_t$ -CONR<sup>a27</sup>Ra28,  $-(CH_2)_t$ -ORa20,  $-(CH_2)_t$ -NRa29CO-Ra24,  $-(CH_2)_t$ -S(O)<sub>q</sub>-Ra25 or  $-(CH_2)_t$ -SO<sub>2</sub>-NHRa26.

[0100] Particularly preferably, it is the above-defined halogen atom, the above-defined optionally substituted C<sub>1-6</sub> alkyl, - (CH<sub>2</sub>)<sub>t</sub>-COOR<sup>a19</sup>, -(CH<sub>2</sub>)<sub>t</sub>-CONR<sup>a27</sup>Ra<sup>28</sup>, -(CH<sub>2</sub>)<sub>t</sub>-OR<sup>a20</sup> or -(CH<sub>2</sub>)<sub>t</sub>-S(O)<sub>q</sub>-Ra<sup>25</sup>, which is specifically fluorine atom, chlorine atom, bromine atom, nitro, methyl, tert-butyl, carboxyl, trifluoromethyl, hydroxymethyl, methoxymethyl, 2-carboxylethyl, methoxy, carbamoyl, methylthio, dimethylaminocarbonyl, methylsulfonyl or acetylamino. More prefer-

ably, it is fluorine atom, chlorine atom, methyl, tert-butyl, carboxyl, methoxy, carbamoyl, methylthio, dimethylaminocarbonyl, methylsulfonyl or acetylamino, most preferably fluorine atom or chlorine atom.

[0101] Examples of  $C_{6-14}$  aryl optionally substituted by 1 to 5 substituent(s) selected from group D preferably include phenyl, 3-fluorophenyl, 4-fluorophenyl, 3-chlorophenyl, 4-chlorophenyl, 3,5-dichlorophenyl, 4-bromophenyl, 4-nitrophenyl, 4-methylphenyl, 4-tert-butylphenyl, 2-trifluoromethylphenyl, 4-trifluoromethylphenyl, 4-(hydroxymethyl)phenyl, 4-(methoxymethyl)phenyl, 4-carboxylphenyl, 4-methoxyphenyl, 3,4,5-trimethoxyphenyl, 4-carbomylphenyl, 4-methylsulfonylphenyl, 4-dimethylaminocarbonyl)phenyl, 4-methylsulfonylphenyl, 4-aminosulfonylphenyl, 4-cyanophenyl and 4-tetrazolylphenyl, particularly preferably 4-chlorophenyl.

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[0102] The heterocyclic group optionally substituted by 1 to 5 substituent(s) selected from group B is that wherein the above-defined heterocyclic group is optionally substituted by 1 to 5 substituent(s), and includes unsubstituted heterocyclic group. The substituent(s) is(are) selected from the above-defined halogen atom, cyano, nitro, the above-defined  $C_{1-6}$  alkyl, the above-defined halogenated  $C_{1-6}$  alkyl, the above-defined  $C_{1-6}$  alkanoyl, -(CH<sub>2</sub>)<sub>r</sub>-COOR<sup>b1</sup>, -(CH<sub>2</sub>)<sub>r</sub>-CONR<sup>b1</sup>R<sup>b2</sup>, -(CH<sub>2</sub>)<sub>r</sub>-NR<sup>b1</sup>R<sup>b2</sup>, -(CH<sub>2</sub>)<sub>r</sub>-NR<sup>b1</sup>COR<sup>b2</sup>, -(CH<sub>2</sub>)<sub>r</sub>-NHSO<sub>2</sub>R<sup>b1</sup>, -(CH<sub>2</sub>)<sub>r</sub>-OR<sup>b1</sup>, -(CH<sub>2</sub>)<sub>r</sub>-SR<sup>b1</sup>, -(CH<sub>2</sub>)<sub>r</sub>-SR<sup>b1</sup>, and -(CH<sub>2</sub>)<sub>r</sub>-SO<sub>2</sub>NR<sup>b1</sup>R<sup>b2</sup> wherein R<sup>b1</sup> and R<sup>b2</sup> are each independently hydrogen atom or the above-defined  $C_{1-6}$  alkyl and r is 0 or an integer of 1 to 6.

[0103] Examples thereof include 2-pyridyl, 3-pyridyl, 4-pyridyl, 3-fluoropyridin-4-yl, 3-chloropyridin-4-yl, 4-chloropyridin-3-yl, pyrazinyl, pyrimidinyl, pyridazinyl, 1,3,5-triazinyl, pyrrolyl, pyrazolyl, imidazolyl, 1,2,4-triazolyl, tetrazolyl, 2-thienyl, 3-thienyl, furyl, oxazolyl, 2-methyloxazol-4-yl, isoxazolyl, thiazolyl, 2-methylthiazol-4-yl, 2,5-dimethylthiazol-4-yl, 2,4-dimethylthiazol-5-yl, isothiazolyl, thiadiazolyl, pyrrolinyl, pyrrolidinyl, 3-hydroxypyrrolidinyl, imidazolidinyl, azetidinyl, piperidyl, 3-hydroxypiperidino, 4-hydroxypiperidino, 3,4-dihydroxypiperidino, 4-methoxypiperidino, 4-carboxypiperidino, 4-(hydroxymethyl)piperidino, 2,2,6,6-tetramethylpiperidino, 0,2,2,6,6-tetramethyl-4-hydroxypiperidino, N-methylpiperidin-4-yl, N-(tert-butoxycarbonyl)piperidin-4-yl, N-acetylpiperidin-4-yl, N-methylsulfonylpiperidin-4-yl, piperazinyl, 4-methylsulfonylpiperazinyl, morpholinyl, thiomorpholinyl, 1-oxothiomorpholin-4-yl, 1,1-dioxothiomorpholin-4-yl, tetrahydropyranyl, quinolyl, isoquinolyl, quinozolinyl, quinoxalyl, phthalazinyl, cinnolinyl, naphthyridinyl, 5,6,7,8-tetrahydroquinolyl, indolyl, benzimidazolyl, indolinyl, benzothiazolyl,

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and the like.

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[0104] The heterocyclic moiety is preferably a heterocyclic group which is a 5-membered or a 6-membered monocyclic group. Examples thereof include pyridyl, pyrazinyl, pyrimidinyl, pyridazinyl, 1,3,5-triazinyl, pyrrolyl, pyrazolyl, imidazolyl, 1,2,4-triazolyl, tetrazolyl, thienyl, furyl, oxazolyl, isoxazolyl, thiazolyl, isothiazolyl, thiadiazolyl, pyrrolidinyl, piperidyl, piperazinyl, morpholinyl, thiomorpholinyl and tetrahydropyranyl, and the group B here is preferably the above-defined halogen atom, the above-defined  $C_{1-6}$  alkyl, the above-defined  $C_{1-6}$ 

alkanoyl,  $-(CH_2)_r$ -COOR<sup>b1</sup>,  $-(CH_2)_r$ -CONR<sup>b1</sup>R<sup>b2</sup> or  $-(CH_2)_r$ -OR<sup>b1</sup>.

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[0105] Examples of heterocyclic group optionally substituted by 1 to 5 substituent(s) selected from group B preferably include piperidino, 4-methylpiperidino, 2,6-dimethylpiperidino, 4-hydroxypiperidino, 1-piperazinyl, 1-(methylsulfonyl) piperidin-4-yl, 1-pyrrolidinyl, morpholino, 4-thiomorpholinyl, tetrahydropyranyl, pyridyl, thiazolyl,

[0106] Particularly preferably, it is piperidino, 4-methylpiperidino, 2,6-dimethylpiperidino, 4-hydroxypiperidino, 1-piperazinyl, 1-pyrrolidinyl, morpholino or 4-thiomorpholinyl at Ra18, tetrahydropyranyl or 4-hydroxypiperidino at Ra20, piperidino, 4-hydroxypiperidino or 3,4-dihydroxypiperidino at Ra21, pyridyl or morpholino at Ra24, pyridyl or 4-hydroxypiperidino at Ra25, pyridyl or thiazolyl at Ra26 and at Ra27 and Ra28, it is 1-(methylsulfonyl)piperidin-4-yl, 3-hydroxypyrrolidinyl, 3-hydroxypiperidino, 4-hydroxypiperidino, 3,4-dihydroxypiperidino, 4-methoxypiperidino, 4-carboxypiperidino, 4-(hydroxymethyl)piperidino, 2-oxopiperidino, 4-oxopiperidino, 2,2,6,6-tetramethylpiperidino, 2,2,6,6-tetramethylpiperidino, 4-methylsulfonylpiperazinyl, 1-oxothiomorpholin-4-yl or 1,1-dioxothiomorpholin-4-yl, and 2-oxazolin-2-yl at Ra22 and Ra23.

[0107] The heterocyclic group optionally substituted by 1 to 5 substituent(s) selected from group D is that wherein the above-defined heterocyclic group is optionally substituted by 1 to 5 substituent(s), and includes unsubstituted heterocyclic group. The substituent(s) is(are) selected from the substituent(s) of the above-mentioned group D (substituents shown under (a) to (q)).

[0108] Examples of the group D here include the substituent(s) exemplified for  $C_{6-14}$  aryl optionally substituted by 1 to 5 substituent(s) selected from group D.

[0109] Examples of heterocyclic group optionally substituted by 1 to 5 substituent(s) selected from group D include 2-pyridyl, 3-pyridyl, 4-pyridyl, 3-fluoropyridin-4-yl, 3-chloropyridin-4-yl, 4-chloropyridin-3-yl, pyrazinyl, pyrimidinyl, py-

ridazinyl, 1,3,5-triazinyl, pyrrolyl, pyrazolyl, imidazolyl, 1,2,4-triazolyl, tetrazolyl, 2-thienyl, 3-thienyl, furyl, oxazolyl, 2-methyloxazol-4-yl, isoxazolyl, thiazolyl, 2-methylthiazol-4-yl, 2,5-dimethylthiazol-4-yl, 2,4-dimethylthiazol-5-yl, isothiazolyl, thiadiazolyl, pyrrolinyl, pyrrolidinyl, imidazolidinyl, piperidyl, N-methylpiperidin-4-yl, N-(tert-butoxycarbonyl)piperidin-4-yl, N-acetylpiperidin-4-yl, N-methylsulfonylpiperidin-4-yl, piperazinyl, morpholinyl, thiomorpholinyl, tetrahydropyranyl, quinolyl, isoquinolyl, quinazolinyl, quinoxalyl, phthalazinyl, cinnolinyl, naphthyridinyl, 5,6,7,8-tetrahydroquinolyl, indolyl, benzimidazolyl, indolinyl, benzofuranyl, benzothienyl, benzothiazolyl

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 $N = 15$ 

and the like.

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[0110] In addition, the heterocyclic group may be substituted at the 3-, 4-, 5- or 6-position of 2-pyridyl, at the 2-, 4-, 5- or 6-position of 3-pyridyl, at the 2-, 3-, 5- or 6-position of 4-pyridyl, at the 3-, 4- or 5-position of 2-thienyl, or at the 2-, 4- or 5-position of 3-thienyl, by fluorine atom, chlorine atom, bromine atom, nitro, methyl, tert-butyl, carboxyl, trif-luoromethyl, hydroxymethyl, methoxymethyl, 2-carboxylethyl, methoxy, carbamoyl, methylthio, dimethylaminocarbonyl, methylsulfonyl, amino or acetylamino.

[0111] At Z and Z', the heterocyclic moiety is preferably a heterocyclic group which is a 5-membered or 6-membered monocyclic group. Examples thereof include pyridyl, pyrazinyl, pyrimidinyl, pyridazinyl, 1,3,5-triazinyl, pyrrolyl, 2-oxopyrrolidinyl, 2-oxopyrrolidinyl, 2-oxopyrrolidinyl, 2-oxopyrrolidinyl, 2-oxopyrrolidinyl, imidazolyl, 2-imidazolyl, 2-oxomidazolidinyl, 1,2,4-triazolyl, tetrazolyl, thienyl, furyl, oxazolyl, isoxazolyl, 2-oxazolinyl, thiazolyl, isothiazolyl, 1,1-dioxoisothiazolidinyl, thiadiazolyl, pyrrolidinyl, piperidyl, piperazinyl, morpholinyl, thiomorpholinyl, tetrahydropyranyl,  $\Delta^2$ -1,2,4-oxadiazolyl, 5-oxo- $\Delta^2$ -1,2,4-thiadiazolinyl and 2-oxo-3H-1,2,3,5-oxathiadiazolinyl. The group D here is preferably the above-defined halogen atom, nitro, the above-defined optionally substituted  $C_{1-6}$  alkyl,

 $-(CH_2)_t-COOR^{a19}, \quad -(CH_2)_t-CONR^{a27}R^{a28}, \quad -(CH_2)_t-OR^{a20}, \quad -(CH_2)_t-NR^{a29}CO-R^{a24}, \quad -(CH_2)_t-S(O)_q-R^{a25} \quad or \quad -(CH_2)_t-SO_2-NHR^{a26}.$ 

[0112] Examples of heterocyclic group optionally substituted by 1 to 5 substituent(s) selected from group D preferably

include piperidino, 4-hydroxypiperidino, 2-oxopiperidin-1-yl, 1-piperazinyl, 1-pyrrolidinyl, 2-oxopyrrolidin-1-yl, morpholino, 4-thiomorpholinyl, 4-tetrahydropyranyl, 3-pyridyl, 2-pyrimidinyl, 2-imidazolin-2-yl, 2-oxoimidazolidin-1-yl, 2-oxoxazolidin-1-yl, 5-tetrazolyl, 2-thiazolyl, 4-thiazolyl, 5-thiazolyl, 2-methylthiazol-4-yl, 5-methylthiazol-2-yl, 2-aminothiazol-4-yl, 3-methyl-1,2,4-oxadiazol-5-yl, 1,1-dioxoisothiazolidin-2-yl, 4,4-dimethyl- $\Delta^2$ -oxazolin-2-yl, 2-thienyl, 5-chlorothiophen-2-yl, 5-methyloxazol-2-yl, 5-oxo- $\Delta^2$ -1,2,4-oxadiazolin-3-yl, 5-oxo- $\Delta^2$ -1,2,4-thiadiazolin-3-yl and 2-oxo-3H-1,2,3,5-oxathiazolin-4-yl.

[0113] Particularly preferably, it is pyridyl, pyrimidinyl, tetrazolyl, thienyl, piperidyl, 2-oxopiperidin-1-yl, 2-oxopyrrolidin-1-yl, 2-imidazolin-2-yl, 2-oxoimidazolidin-1-yl, 2-oxooxazolidin-1-yl, 2-methylthiazol-4-yl, 5-methylthiazol-2-yl, 2-aminothiazol-4-yl, 3-methyl-1,2,4-oxadiazol-5-yl, 1,1-dioxoisothiazolidin-2-yl, 4,4-dimethyl- $\Delta^2$ -oxazolin-2-yl, 5-chlorothiophen-2-yl, 5-methyloxazol-2-yl, 5-oxo- $\Delta^2$ -1,2,4-oxadiazolin-3-yl, 5-oxo- $\Delta^2$ -1,2,4-thiadiazolin-3-yl or 2-oxo-3H-1,2,3,5-oxathiadiazolin-4-yl, more preferably 2-oxopiperidin-1-yl, 2-oxopyrrolidin-1-yl, 2-oxoimidazolidin-1-yl, 2-oxooxazolidin-1-yl or 1,1-dioxoisothiazolidin-2-yl, most preferably 2-oxopyrrolidin-1-yl.

[0114] The  $C_{3-8}$  cycloalkyl optionally substituted by 1 to 5 substituent(s) selected from group C is that wherein the above-defined  $C_{3-8}$  cycloalkyl is optionally substituted by the 1 to 5 substituent(s) selected from hydroxyl group, the above-defined halogen atom, the above-defined  $C_{1-6}$  alkyl and the above-defined  $C_{1-6}$  alkoxy, which may be unsubstituted. Examples thereof include cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, cyclohetyl, 4-fluorocyclohexyl, 2-methylcyclopentyl, 3-methylcyclohexyl, 4-methylcyclohexyl, 4,4-dimethylcyclohexyl, 3,5-dimethylcyclohexyl, 4-tert-butylcyclohexyl, 4-hydroxycyclohexyl, 4-methoxycyclohexyl and 2,3,4,5,6-pentafluorocyclohexyl.

[0115] The cycloalkyl moiety is preferably cyclopentyl or cyclohexyl, particularly preferably cyclohexyl.

[0116] At the ring Cy and ring Cy', the C<sub>3-8</sub> cycloalkyl optionally substituted by 1 to 5 substituent(s) selected from group C is preferably cyclopentyl, cyclohexyl, 4-fluorocyclohexyl, 4-methylcyclohexyl, 4,4-dimethylcyclohexyl, 4-tert-butylcyclohexyl, 4-hydroxycyclohexyl or 4-methoxycyclohexyl, more preferably cyclopentyl or cyclohexyl, particularly preferably cyclohexyl.

[0117] The C<sub>3-8</sub> cycloalkyl optionally substituted by 1 to 5 substituent(s) selected from the above group B is that wherein the above-defined C<sub>3-8</sub> cycloalkyl is optionally substituted by 1 to 5 substituent(s), and includes unsubstituted cycloalkyl. The substituents are selected from the above group B.

[0118] Specific examples thereof include cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, cyclohexyl, 4-fluorocyclohexyl, 2-methylcyclopentyl, 3-methylcyclohexyl, 4-methylcyclohexyl, 4,4-dimethylcyclohexyl, 3,5-dimethylcyclohexyl, 4-tert-butylcyclohexyl, 4-hydroxycyclohexyl, 4-methoxycyclohexyl and 2,3,4,5,6-pentafluorocyclohexyl.

[0119] Also exemplified are those wherein cyclopentyl or cyclohexyl is substituted by fluorine atom, chlorine atom, bromine atom, nitro, methyl, tert-butyl, carboxyl, trifluoromethyl, hydroxymethyl, methoxymethyl, 2-carboxylethyl, methoxy, carbamoyl, methylthio, dimethylaminocarbonyl, methylsulfonyl or acetylamino.

**[0120]** At cycloalkyl moiety, it is preferably cyclopropyl, cyclobutyl, cyclopentyl or cyclohexyl. As the  $C_{3-8}$  cycloalkyl optionally substituted by 1 to 5 substituent(s) selected from the above group B, it is particularly preferably cyclopropyl, cyclobutyl, cyclohexyl or 4-hydroxycyclohexyl at  $R^{a27}$  and  $R^{a28}$ .

[0121] The  $C_{3-8}$  cycloalkyl optionally substituted by 1 to 5 substituent(s) selected from group D is that wherein the above-defined  $C_{3-8}$  cycloalkyl is optionally substituted by 1 to 5 substituent(s), and includes unsubstituted cycloalkyl. The substituent(s) is(are) selected from the substituent(s) of the above-mentioned group D (substituents shown under (a) to (q)).

[0122] The group D here includes the substituents recited with regard to C<sub>6-14</sub> aryl optionally substituted by 1 to 5 substituent(s) selected from group D.

[0123] Examples thereof include cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, cyclohexyl, 4-fluorocyclohexyl, 2-methylcyclohexyl, 3-methylcyclohexyl, 4-methylcyclohexyl, 4,4-dimethylcyclohexyl, 3,5-dimethylcyclohexyl, 4-tert-butylcyclohexyl, 4-hydroxycyclohexyl, 4-methoxycyclohexyl and 2,3,4,5,6-pentafluorocyclohexyl.

[0124] The group D may be, for example, cyclopentyl or cyclohexyl substituted by fluorine atom, chlorine atom, bromine atom, nitro, methyl, tert-butyl, carboxyl, trifluoromethyl, hydroxymethyl, methoxymethyl, 2-carboxylethyl, methoxy, carbamoyl, methylthio, dimethylaminocarbonyl, methylsulfonyl or acetylamino.

[0125] The cycloalkyl moiety is preferably cyclopentyl or cyclohexyl, and at Z and Z', it is particularly preferably cyclohexyl.

[0126] The optionally substituted C<sub>3-8</sub> cycloalkenyl is that wherein the above-defined C<sub>3-8</sub> cycloalkenyl is optionally substituted by substitutent(s) selected from hydroxyl group, the above-defined halogen atom, the above-defined C<sub>1-6</sub> alkyl and the above-defined C<sub>1-6</sub> alkoxy, which may be unsubstituted. Examples thereof include cyclopropenyl, cyclobutenyl, cyclopentenyl, cyclopentadienyl, cyclohexenyl, 4-fluoro-2-cyclohexenyl, 4-methyl-2-cyclohexenyl, 4-methyl-3-cyclohexenyl, 2,4-cyclohexadien-1-yl, 2,5-cyclohexadien-1-yl, cycloheptenyl and cyclooctenyl and the like, but do not include aryl (e.g., phenyl) or completely saturated cycloalkyl.

[0127] The optionally substituted  $C_{3-8}$  cycloalkenyl is particularly preferably cyclohexenyl at the ring Cy. [0128] The  $C_{6-14}$  aryl  $C_{1-6}$  alkyl optionally substituted by 1 to 5 substituent(s) selected from group B is that wherein the above-defined  $C_{6-14}$  aryl  $C_{1-6}$  alkyl is optionally substituted by 1 to 5 substituent(s), and includes unsubstituted

arylalkyl. The substituent(s) is(are) selected from the above-mentioned group B.

[0129] Examples thereof include benzyl, 1-naphthylmethyl, 2-naphthylmethyl, 3-phenylpropyl, 2-phenylpropyl, 3-fluorobenzyl, 4-fluorobenzyl, 3-chlorobenzyl, 4-chlorobenzyl, 2,4-dichlorobenzyl, 3,5-dichlorobenzyl, pentafluorobenzyl, 4-methylbenzyl, 4-tert-butylbenzyl, 2-trifluoromethylbenzyl, 4-trifluoromethylbenzyl, 4-nitrobenzyl, 4-cyanobenzyl, 4-acetylbenzyl, 4-carboxylbenzyl, 4-carboxylbenzyl, 4-aminobenzyl, 4-dimethylaminobenzyl, 4-acetylaminobenzyl, 4-(methylsulfonylamino)benzyl, 4-methoxybenzyl, 3,4,5-trimethoxybenzyl, 4-methylsulfonylbenzyl, 4-aminosulfonylbenzyl, 3-nitro-4-methoxybenzyl and 4-nitro-3-methoxybenzyl.

[0130] The  $C_{6-14}$  aryl  $C_{1-6}$  alkyl moiety is preferably benzyl or phenethyl, particularly preferably benzyl. The group B is preferably the above-defined halogen atom, nitro, the above-defined  $C_{1-6}$  alkyl, the above-defined halogenated  $C_{1-6}$  alkyl or -  $(CH_2)_r$ -OR<sup>b1</sup>. Examples thereof include fluorine atom, chlorine atom, nitro, methyl, tert-butyl, trifluoromethyl, methoxy or trifluoromethyloxy, particularly preferably fluorine atom or chlorine atom.

[0131] The specific C<sub>6-14</sub> aryl C<sub>1-6</sub> alkyl optionally substituted by 1 to 5 substituent(s) selected from group B at R<sup>a12</sup> and R<sup>a13</sup> is preferably benzyl, phenethyl, 3-chlorobenzyl, 4-chlorobenzyl, 4-tert-butylbenzyl or 3-trifluoromethylbenzyl, it is preferably benzyl at R<sup>a1</sup>, R<sup>a19</sup>, R<sup>a27</sup>, R<sup>a28</sup>, R<sup>a31</sup> and R<sup>b5</sup>, it is preferably benzyl, phenethyl, 4-fluorobenzyl, 2-chlorobenzyl, 3-chlorobenzyl, 4-chlorobenzyl, 4-tert-butylbenzyl or 4-trifluoromethylbenzyl at R<sup>a20</sup>, and 4-chlorobenzyl, 3,5-dichlorobenzyl or 4-trifluoromethylbenzyl at R<sup>a22</sup> and R<sup>a23</sup>.

[0132] It is particularly preferably benzyl at other substituents.

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[0133] The  $C_{6-14}$  aryl  $C_{1-6}$  alkyl optionally substituted by 1 to 5 substituent(s) selected from group D is that wherein the above-defined  $C_{6-14}$  aryl  $C_{1-6}$  alkyl is optionally substituted by 1 to 5 substituent(s), and includes unsubstituted aryl. The substituent(s) is(are) selected from the substituent(s) of the above-mentioned group D (substituents shown under (a) to (g)).

[0134] Examples of group D include fluorine atom, chlorine atom, bromine atom, nitro, cyano, methyl, ethyl, propyl, isopropyl, tert-butyl, trifluoromethyl, hydroxymethyl, 2-hydroxyethyl, methoxymethyl, 2-carboxylethyl, methoxycarbonylmethyl, ethoxycarbonylmethyl, acetyl, carboxyl, methoxycarbonyl, ethoxycarbonyl, carbamoyl, methylaminocarbonyl, isopropylaminocarbonyl, dimethylaminocarbonyl, diethylaminocarbonyl, (2-hydroxyethyl)aminocarbonyl, (carboxylmethyl)aminocarbonyl, hydroxyl group, methoxy, ethoxy, isopropyloxy, hydroxymethyloxy, carboxylmethyloxy, (dimethylaminocarbonyl)methyloxy, amino, methylamino, dimethylamino, diethylamino, acetylamino, methylsulfonylamino, methylthio, methylsulfonyl, methylsulfinyl, aminosulfonyl, methylaminosulfonyl and dimethylaminosulfonyl. [0135] Examples of C<sub>6-14</sub> aryl C<sub>1-6</sub> alkyl optionally substituted by 1 to 5 substituent(s) selected from group D include benzyl, 1-naphthylmethyl, 2-naphthylmethyl, phenethyl, 3-phenylpropyl, 2-phenylpropyl, 3-fluorobenzyl, 4-fluorobenzyl, 3-chlorobenzyl, 4-chlorobenzyl, 2,4-dichlorobenzyl, 3,5-dichlorobenzyl, 4-bromobenzyl, 4-nitrobenzyl, pentafluorobenzyl, 4-methylbenzyl, 4-tert-butylbenzyl, 2-trifluoromethylbenzyl, 4-trifluoromethylbenzyl, 4-(hydroxymethyl)benzyl, 4-(methoxymethyl)benzyl, 4-(2-carboxylethyl)benzyl, 3-carboxylbenzyl, 4-carboxylbenzyl, 4-methoxybenzyl, 3,4,5-trimethoxybenzyl, 4-carbamoylbenzyl, 4-methylthiobenzyl, 4-(dimethylaminocarbonyl)benzyl, 4-methylsulfonylbenzyl, 4-(acetylamino)benzyl, 4-cyanobenzyl, 4-acetylbenzyl, 4-aminobenzyl, 4-dimethylaminobenzyl, 4-(methylsulfonylamino)benzyl, 4-methylsulfinylbenzyl, 4-aminosulfonylbenzyl, (3-nitro-4-methoxyphenyl)methyl and (4-nitro-3-methoxyphenyl)methyl.

[0136] At Z and Z', the  $C_{6-14}$  aryl  $C_{1-6}$  alkyl moiety is preferably benzyl or phenethyl, and the group D here is preferably the above-defined halogen atom, nitro, the above-defined optionally substituted  $C_{1-6}$  alkyl, -(CH<sub>2</sub>)<sub>1</sub>-COOR<sup>a19</sup>, -(CH<sub>2</sub>)<sub>1</sub>-CONR<sup>a27</sup>Ra<sup>28</sup>, -(CH<sub>2</sub>)<sub>1</sub>-ORa<sup>20</sup>, -(CH<sub>2</sub>)<sub>1</sub>-NRa<sup>29</sup>CO-Ra<sup>24</sup>, -(CH<sub>2</sub>)<sub>1</sub>-S(O)<sub>0</sub>-Ra<sup>25</sup> or -(CH<sub>2</sub>)<sub>1</sub>-SO<sub>2</sub>-NHRa<sup>26</sup>.

[0137] The  $C_{6-14}$  aryl  $C_{1-6}$  alkyl optionally substituted by 1 to 5 substituent(s) selected from group D is preferably benzyl, 3-fluorobenzyl, 4-fluorobenzyl, 3-chlorobenzyl, 4-chlorobenzyl, 3,5-dichlorobenzyl, 4-bromobenzyl, 4-nitrobenzyl, 4-methylbenzyl, 4-tert-butylbenzyl, 2-trifluoromethylbenzyl, 4-trifluoromethylbenzyl, 4-(hydroxymethyl)benzyl, 4-(methoxymethyl)benzyl, 4-carboxylbenzyl, 4-carboxylbenzyl, 4-methoxybenzyl, 3,4,5-trimethoxybenzyl, 4-carbamoylbenzyl, 4-methylthiobenzyl, 4-(dimethylaminocarbonyl)benzyl, 4-methylsulfonylbenzyl, 4-acetylaminobenzyl, 4-methylsulfonylbenzyl or 4-aminosulfonylbenzyl.

[0138] It is particularly preferably the above-defined halogen atom, the above-defined optionally substituted  $C_{1-6}$  alkyl, -  $(CH_2)_t$ - $COOR^{a19}$ , - $(CH_2)_t$ - $CONR^{a27}R^{a28}$ , - $(CH_2)_t$ - $OR^{a20}$  or - $(CH_2)_t$ - $S(O)_q$ - $R^{a25}$ . Examples thereof include fluorine atom, chlorine atom, bromine atom, nitro, methyl, tert-butyl, carboxyl, trifluoromethyl, hydroxymethyl, methoxymethyl, 2-carboxylethyl, methoxy, carbamoyl, methylthio, dimethylaminocarbonyl, methylsulfonyl and acetylamino. It is more preferably fluorine atom, chlorine atom, methyl, tert-butyl, carboxyl, methoxy, carbamoyl, methylthio, dimethylaminocarbonyl or methylsulfonyl, most preferably fluorine atom or chlorine atom.

**[0139]** The heterocycle  $C_{1-6}$  alkyl optionally substituted by 1 to 5 substituent(s) selected from group B is that wherein the above-defined heterocycle  $C_{1-6}$  alkyl is optionally substituted by 1 to 5 substituent(s), and includes unsubstituted heterocycle  $C_{1-6}$  alkyl. The substituent(s) is(are) selected from the above-mentioned group B.

[0140] Examples thereof include 2-pyridylmethyl, 3-pyridylmethyl, 2-chloropyridin-4-ylmethyl, 4-pyridylmethyl, pyrrolylmethyl, imidazolylmethyl, 2-thienylmethyl, 3-thienylmethyl, 2-furylmethyl, 2-oxazolylmethyl, 5-isothiazolylmethyl, 2-methyloxazol-4-ylmethyl, 2-thiazolylmethyl, 4-thiazolylmethyl, 5-thiazolylmethyl, 2-methyl, 2-methyl

ylthiazol-5-ylmethyl, 2,5-dimethylthiazol-4-ylmethyl, 4-methylthiazol-2-ylmethyl, 2,4-dimethylthiazol-5-ylmethyl, 2-iso-thiazolylmethyl, 2-pyrrolinylmethyl, pyrrolidinylmethyl, piperidylmethyl, 4-piperidylmethyl, 1-methylpiperidin-4-ylmethyl, 4-hydroxypiperidihomethyl, 3-hydroxypyrrolidinylmethyl, 2-(4-hydroxypiperidino)ethyl, 1-(tert-butoxycarbonyl)piperidin-4-ylmethyl, 1-acetylpiperidin-4-ylmethyl, 1-methylsulfonylpiperidin-4-ylmethyl, piperazinylmethyl, morpholinomethyl, thiomorpholinylmethyl, 1-tetrahydropyranylmethyl, 2-quinolylmethyl, 1-isoquinolylmethyl and the like.

[0141] The heterocyclic moiety is preferably a heterocyclic group which is a 5-membered or 6-membered monocyclic group. Examples thereof include pyridyl, pyrazinyl, pyrimidinyl, pyridazinyl, 1,3,5-triazinyl, pyrrolyl, pyrazolyl, imidazolyl, 1,2,4-triazolyl, tetrazolyl, thienyl, furyl, oxazolyl, isoxazolyl, thiazolyl, isothiazolyl, thiadiazolyl, pyrrolidinyl, piperidyl, piperazinyl, morpholinyl, thiomorpholinyl and tetrahydropyranyl, and the alkyl moiety thereof is preferably straight chain alkyl having 1 to 4 carbon atoms. The group B here is preferably the above-defined halogen atom, the above-defined  $C_{1-6}$  alkyl, the above-defined halogenated  $C_{1-6}$  alkyl, the above-defined  $C_{1-6}$  alkyl, the above-defined  $C_{1-6}$  alkyl,  $C_{1-6}$ 

[0142] Examples of heterocycle C<sub>1-6</sub> alkyl optionally substituted by 1 to 5 substituent(s) selected from group B preferably include 2-pyridylmethyl, 3-pyridylmethyl, 2-chloropyridin-4-ylmethyl, 4-pyridylmethyl, piperidin-4-ylmethyl, 1-methylpiperidin-4-ylmethyl, 2-(4-hydroxypiperidino)ethyl, 1-acetylpiperidin-4-ylmethyl, 1-(tert-butoxycarbonyl)piperidin-4-ylmethyl, 1-(methylsulfonyl)-piperidin-4-ylmethyl, 2-thiazolylmethyl, 4-thiazolylmethyl, 2-methylthiazolin-4-ylmethyl, 3-pyridylmethyl, 2-chloropyridin-4-ylmethyl and 4-methylthiazol-2-ylmethyl. Particularly preferably, it is 2-pyridylmethyl, 3-pyridylmethyl, 2-chloropyridin-4-ylmethyl, 4-pyridylmethyl, piperidin-4-ylmethyl, 1-methylpiperidin-4-ylmethyl, 2-(4-hydroxypiperidino)ethyl, 1-acetylpiperidin-4-ylmethyl, 1-(tert-butoxycarbonyl)piperidin-4-ylmethyl, 1-(methylsulfonyl)piperidin-4-ylmethyl, 2-methylthiazolin-4-ylmethyl, 2,4-dimethylthiazolin-5-ylmethyl or 4-methylthiazol-2-ylmethyl at Ra<sup>22</sup> and Ra<sup>23</sup>, and 4-pyridylmethyl or 4-methylthiazol-2-ylmethyl at Ra<sup>27</sup> and Ra<sup>28</sup>.

**[0143]** The heterocycle  $C_{1-6}$  alkyl optionally substituted by 1 to 5 substituent(s) selected from group D is that wherein the above-defined heterocycle  $C_{1-6}$  alkyl is optionally substituted by 1 to 5 substituent(s), and includes unsubstituted heterocycle  $C_{1-6}$  alkyl. The substituent(s) is(are) selected from the above-mentioned group D (substituents shown under (a) to (q)).

[0144] Examples of group D here include fluorine atom, chlorine atom, bromine atom, nitro, cyano, methyl, ethyl, propyl, isopropyl, tert-butyl, trifluoromethyl, hydroxymethyl, 2-hydroxyethyl, methoxymethyl, 2-carboxylethyl, methoxycarbonylmethyl, ethoxycarbonylmethyl, acetyl, carboxyl, methoxycarbonyl, ethoxycarbonyl, carbamoyl, methylaminocarbonyl, isopropylaminocarbonyl, dimethylaminocarbonyl, diethylaminocarbonyl, (2-hydroxyethyl)aminocarbonyl, (carboxylmethyl)aminocarbonyl, hydroxyl group, methoxy, ethoxy, isopropyloxy, hydroxymethyloxy, carboxylmethyloxy, (dimethylaminocarbonyl)methyloxy, amino, methylamino, dimethylamino, diethylamino, acetylamino, methylsulfonylamino, methylthio, methylsulfonyl, methylsulfinyl, aminosulfonyl, methylaminosulfonyl and dimethylaminosulfonyl. [0145] Examples of heterocycle C<sub>1-6</sub> alkyl optionally substituted by 1 to 5 substituent(s) selected from group D include 2-pyridylmethyl, 3-pyridylmethyl, 2-chloropyridin-4-ylmethyl, 4-pyridylmethyl, pyrrolylmethyl, imidazolylmethyl, 2-thienylmethyl, 3-thienylmethyl, 2-furylmethyl, 2-oxazolylmethyl, 5-isothiazolylmethyl, 2-methyloxazol-4-ylmethyl, 2-thiazolylmethyl, 4-thiazolylmethyl, 5-thiazolylmethyl, 2-methylthiazol-4-ylmethyl, 2-methylthiazol-5-ylmethyl, 2,5-dimethylthiazol-4-ylmethyl, 4-methylthiazol-2-ylmethyl, 2,4-dimethylthiazol-5-ylmethyl, 2-isothiazolylmethyl, 2-pyrrolinylmethyl, pyrrolidinylmethyl, piperidylmethyl, 4-piperidylmethyl, 1-methylpiperidin-4-ylmethyl, 4-hydroxypiperidinomethyl, 2-(4-hydroxypiperidino)ethyl, 1-(tert-butoxycarbonyl)piperidin-4-ylmethyl, 1-acetylpiperidin-4-ylmethyl, 1-methylsulfonylpiperidin-4-ylmethyl, piperazinylmethyl, morpholinomethyl, thiomorpholinylmethyl, 1-tetrahydropyranylmethyl, 2-quinolylmethyl, 1-isoquinolylmethyl, and the like.

[0146] Preferable heterocyclic moiety at Z and Z' is heterocylic group which is 5-membered or 6-membered monocyclic group. Examples of the heterocyclic moiety include pyridyl, pyrazinyl, pyrimidinyl, pyridazinyl, 1,3,5-triazinyl, pyrrolyl, pyrazolyl, imidazolyl, 1,2,4-triazolyl, tetrazolyl, thienyl, furyl, oxazolyl, isooxazolyl, thiazolyl, isothiazolyl, thiadiazolyl, pyrrolidinyl, piperidyl, piperazinyl, morpholinyl, thiomorpholinyl and tetrahydropyranyl, and the alkyl moiety is preferably straight chain alkyl having 1 to 4 carbon atoms, particularly methyl (i.e., methylene).

[0147] Preferable group D is the above-defined halogen atom, nitro, the above-defined optionally substituted  $C_{1-6}$  alkyl,- $(CH_2)_t$ - $COOR^{a19}$ , - $(CH_2)_t$ - $CONR^{a27}R^{a28}$ , - $(CH_2)_t$ - $OR^{a20}$ , - $(CH_2)_t$ - $NR^{a29}CO$ - $R^{a24}$ ,- $(CH_2)_t$ - $S(O)_q$ - $R^{a25}$  or - $(CH_2)_t$ - $SO_2$ - $NHR^{a26}$ .

[0148] Preferable examples of heterocycle C<sub>1-6</sub> alkyl optionally substituted by 1 to 5 substituent(s) selected from group D include 2-pyridylmethyl, 3-pyridylmethyl, 2-chloropyridin-4-ylmethyl, 4-pyridylmethyl, piperidin-4-ylmethyl, 1-methylpiperidin-4-ylmethyl, 4-hydroxypiperidinomethyl, 2-(4-hydroxypiperidino)ethyl, 1-acetylpiperidin-4-ylmethyl, 1-(tert-butoxycarbonyl)piperidin-4-ylmethyl, 1-(methylsulfonyl)piperidin-4-ylmethyl, 2-thiazolylmethyl, 4-thiazolylmethyl, 2-methylthiazolin-4-ylmethyl, 2,4-dimethylthiazolin-5-ylmethyl and 4-methylthiazol-2-ylmethyl.

[0149] Particularly preferred is 4-hydroxypiperidinomethyl.

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**[0150]** The  $C_{3-8}$  cycloalkyl  $C_{1-6}$  alkyl optionally substituted by 1 to 5 substituent(s) selected from the above group B is that wherein the above-defined  $C_{3-8}$  cycloalkyl  $C_{1-6}$  alkyl is optionally substituted by 1 to 5 substituent(s), and includes unsubstituted cycloalkylalkyl. The substituents are selected from the above group B.

[0151] Specific examples thereof include cyclopropylmethyl, cyclobutylmethyl, cyclopentylmethyl, cyclohexylmethyl, 2-(cyclopentyl)ethyl, 2-(cyclohexyl)ethyl, cycloheptylmethyl, 4-fluorocyclohexylmethyl, 2-methylcyclohexylmethyl, 3-methylcyclohexylmethyl, 4-methylcyclohexylmethyl, 3,5-dimethylcyclohexylmethyl, 4-tert-butylcyclohexylmethyl, 4-hydroxycyclohexylmethyl, 4-methoxycyclohexylmethyl and 2,3,4,5,6-pentafluorocyclohexylmethyl.

[0152] Also exemplified are those wherein cyclopentylmethyl or cyclohexylmethyl is substituted by fluorine atom, chlorine atom, bromine atom, nito, methyl, tert-butyl, carboxyl, trifluoromethyl, hydroxymethyl, methoxymethyl, 2-carboxylethyl, methoxy, carbamoyl, methylthio, dimethylaminocarbonyl, methylsulfonyl or acetylamino.

[0153] At  $C_{3-8}$  cycloalkyl  $C_{1-6}$  alkyl moiety, it is. preferably cyclopentylmethyl or cyclohexylmethyl, and at  $R^{a20}$ ,  $R^{a27}$  and  $R^{a28}$ , it is particularly preferably cyclohexylmethyl.

[0154] The carboxyl-protecting group only needs to be suitable for reaction conditions, and is capable of protecting and deprotecting and may be, for example, methyl; substituted methyl group such as methoxymethyl, methylthiomethyl, 2-tetrahydropyranyl, methoxyethoxymethyl, benzyloxymethyl, phenacyl, diacylmethyl, phthalimidomethyl etc.; ethyl; substituted ethyl group such as 2,2,2-trichloroethyl, 2-chloroethyl, 2-(trimethylsilyl)ethyl, 2-methylthioethyl, 2-(p-toluenesulfonyl)ethyl, t-butyl etc.; benzyl; substituted benzyl group such as diphenylmethyl, triphenylmethyl, p-nitrobenzyl, 4-picolyl, p-methoxybenzyl, 2-(9,10-dioxo)anthrylmethyl etc.; silyl group such as trimethylsilyl, t-butyldimethylsilyl, phenyldimethylsilyl etc.; and the like.

[0155] Preferred are industrially effective protecting groups and specifically preferred as R<sup>a36</sup> are methyl and ethyl. [0156] In formula [I], X is preferably

—Y—B—(Z) w

wherein each symbol is as defined above.

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[0157] G<sup>1</sup>, G<sup>2</sup>, G<sup>3</sup> and G<sup>4</sup> are each preferably (C-R<sup>1</sup>), (C-R<sup>2</sup>), (C-R<sup>3</sup>) and (C-R<sup>4</sup>), G<sup>5</sup> is preferably a nitrogen atom, and G<sup>6</sup>, G<sup>8</sup> and G<sup>9</sup> are preferably a carbon atom. G<sup>7</sup> is preferably C(-R<sup>7</sup>) or unsubstituted nitrogen atom, wherein R<sup>7</sup> is preferably hydrogen atom.

30 [0158] A preferable combination is G<sup>2</sup> of (C-R<sup>2</sup>) and G<sup>6</sup> of a carbon atom, particularly preferably G<sup>2</sup> of (C-R<sup>2</sup>), G<sup>6</sup> of a carbon atom and G<sup>5</sup> of a nitrogen atom, most preferably G<sup>2</sup> of (C-R<sup>2</sup>), G<sup>6</sup> of a carbon atom, G<sup>5</sup> of a nitrogen atom and G<sup>7</sup> of unsubstituted nitrogen atom.

[0159] In formulas [I] and [II], 1 to 4 of G<sup>1</sup> to G<sup>9</sup> in the moiety

G<sup>2</sup> G<sup>1</sup> G<sup>8</sup> G<sup>7</sup> G<sup>6</sup> G<sup>5</sup>

is(are) preferably a nitrogen atom, specifically preferably

particularly preferably

more preferably

most preferably

$$R^2$$
 $R^3$ 
 $R^4$ 

[0160] It is also a preferable embodiment wherein the

G<sup>2</sup> G<sup>1</sup> G<sup>8</sup> G<sup>3</sup> G<sup>9</sup>

20 molety is aromatic ring.

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[0161] R¹ and R³ are preferably hydrogen atom or -ORa6 (Ra6 is as defined above), particularly preferably hydrogen atom. R² is preferably carboxyl, -COORa¹, -CONRa²Ra³, -SO₂Ra² (each symbol is as defined above) or heterocyclic group having 1 to 4 heteroatom(s) selected from an oxygen atom, a nitrogen atom and a sulfur atom, particularly preferably carboxyl, -COORa¹ or -SO₂Ra², more preferably carboxyl or -COORa¹, most preferably carboxyl. R⁴ is preferably hydrogen atom.

[0162] Ra1 is preferably optionally substituted C<sub>1-6</sub> alkyl.

[0163] When R<sup>2</sup> is carboxyl or -COOR<sup>31</sup>, at least one of R<sup>1</sup>, R<sup>3</sup> and R<sup>4</sup> is preferably hydroxyl group, halogen atom (particularly fluorine atom, chlorine atom) or -OR<sup>36</sup> (wherein R<sup>36</sup> is preferably hydrogen atom or methyl).

[0164] The ring Cy and ring Cy' are preferably cyclopentyl, cyclohexyl, cycloheptyl, tetrahydrothiopyranyl or piperidino, particularly preferably cyclopentyl, cyclohexyl or cycloheptyl, more preferably cyclohexyl.

[0165] The ring A and ring A' are preferably phenyl, pyridyl, pyrazinyl, pyrimidinyl, pyridazinyl, cyclohexyl, cyclohexenyl, furyl or thienyl, particularly preferably phenyl, pyridyl, pyrazinyl, pyrimidinyl or pyridazinyl, more preferably phenyl or pyridyl, and most preferably phenyl.

[0166] The ring B and ring B' are preferably  $C_{1.6}$  aryl or heterocyclic group, specifically preferably, phenyl, pyridyl, pyrazinyl, pyrimidinyl, pyridazinyl, 1,3,5-triazinyl, pyrrolyl, pyrazolyl, imidazolyl, 1,2,4-triazolyl, tetrazolyl, thienyl, furyl, oxazolyl, isoxazolyl, isothiazolyl or thiadiazolyl, particularly preferably phenyl, pyridyl, pyrimidinyl, 1,3,5-triazinyl or thiazolyl, more preferably, phenyl, pyridyl or thiazolyl, and most preferably phenyl or thiazolyl.

[0167] With regard to R<sup>5</sup> and R<sup>6</sup>, one of them is preferably hydrogen atom and the other is halogen atom, particularly fluorine atom. Alternatively, the both are preferably hydrogen atoms. When ring A is phenyl, R<sup>5</sup> and R<sup>6</sup> preferably are present at an ortho position from G<sup>6</sup>. The same applies to R<sup>5</sup> and R<sup>6</sup>.

[0169] The 1, m and n are preferably 0 or an integer of 1 to 4, particularly preferably 0, 1 or 2, at Y. In -(CH<sub>2</sub>)<sub>m</sub>-O-(CH<sub>2</sub>)<sub>n</sub>-, m=n=0 or m=0 and n=1 is more preferable, most preferably m=0 and n=1. In -O-(CH<sub>2</sub>)<sub>m</sub>-CR<sup>a15</sup>Ra<sup>16</sup>-(CH<sub>2</sub>)<sub>n</sub>-, m=n=0, m=0 and n=1, m=1 and n=0 or m=1 and n=1 is more preferable, most preferably m=0 and n=1.

[0170] When Y is -O-(CH<sub>2</sub>)<sub>m</sub>-CR<sup>a15</sup>R<sup>a16</sup>-(CH<sub>2</sub>)<sub>n</sub>-, R<sup>a16</sup> is preferably hydrogen atom, R<sup>a15</sup> is preferably

— (CH<sub>2</sub>) n———— (Z') w

55 wherein the

$$\begin{array}{c}
B \\
\hline
(CH_2)_n \\
R^{a16} \\
(CH_2)_n
\end{array}$$

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moiety is preferably symmetric. The preferable mode of n, ring B, Z and w and the preferable mode of n', ring B', Z' and w' are the same.

[0171] When ring A is phenyl, X or Y is preferably present at the para-position relative to G<sup>6</sup>. When ring B and ring B' are phenyl, Z is preferably present at the ortho or meta-position relative to Y. It is preferable that the 3-position on phenyl have one substituent or the 2-position and the 5-position on phenyl each have one substituent.

20 [0172] When ring B is bonded to Y as pyridin-2-yl, Z is preferably substituted at the 3-position and 6-position of pyridyl; when it is bonded to Y as pyridin-3-yl, Z is preferably substituted at the 2-position and 5-position of pyridyl; and when it is bonded to Y as pyridin-4-yl, Z is preferably substituted at the 2-position and 5-position of pyridyl.

**[0173]** When ring B is thiazolyl, Y is preferably substituted at the 5-position, and Z is preferably substituted at the 2-position, the 4-position or the 2-position and the 4-position. Similarly, when ring B' is thiazolyl,  $(CH_2)_n$ , is also preferably substituted at the 5-position, and Z' is preferably substituted at the 2-position, the 4-position or the 2-position and the 4-position.

**[0174]** Z and Z' are preferably group D, " $C_{6-14}$  aryl optionally substituted by 1 to 5 substituent(s) selected from group D" or "heterocyclic group optionally substituted by 1 to 5 substituent(s) selected from group D", particularly preferably group D or " $C_{6-14}$  aryl optionally substituted by 1 to 5 substituent(s) selected from group D".

[0175] More preferably, they are the above-defined halogen atom, nitro, the above-defined optionally substituted  $C_{1-6}$  alkyl,  $-(CH_2)_t$ - $COR^{a18}$ ,  $-(CH_2)_t$ - $COR^{a19}$ ,  $-(CH_2)_t$ - $CONR^{a27}R^{a28}$ ,  $-(CH_2)_t$ - $OR^{a20}$ ,  $-(CH_2)_t$ - $OR^{a29}CO-R^{a24}$ ,  $-(CH_2)_t$ - $OR^{a29}CO-R^{a24}$ ,  $-(CH_2)_t$ - $OR^{a29}CO-R^{a29}$ ,  $-(CH_2)_t$ - $-(CH_2)_t$ - $-(CH_2)_t$ --(C

**[0176]** With regard to Z and Z', the preferable mode of group D that directly substitutes each ring B and ring B' and the preferable mode of group D that substitutes  $C_{6-14}$  aryl,  $C_{3-8}$  cycloalkyl,  $C_{6-14}$  aryl  $C_{1-6}$  alkyl or heterocyclic group are the same, wherein they may be the same with or different from each other.

[0177] Specific examples of the substituent preferably include fluorine atom, chlorine atom, bromine atom, nitro, cyano, methyl, ethyl, propyl, isopropyl, tert-butyl, trifluoromethyl, hydroxymethyl, 2-hydroxyethyl, methoxymethyl, 2-carboxylethyl, methoxycarbonylmethyl, ethoxycarbonylmethyl, carbamoylmethoxymethyl, (dimethylaminocarbonyl)methoxymethyl, acetyl, isovaleryl, carboxyl, methoxycarbonyl, ethoxycarbonyl, carbamoyl, methylaminocarbonyl, hydroxyaminocarbonyl, ethylaminocarbonyl, propylaminocarbonyl, isopropylaminocarbonyl, butylaminocarbonyl, isobutylaminocarbonyl, tert-butylaminocarbonyl, (4-hydroxybutyl)aminocarbonyl, (1-hydroxypropan-2-yl)aminocarbonyl, oxy)ethoxy]ethyl}aminocarbonyl, N-ethyl-N-methylaminocarbonyl, N-methyl-N-propylaminocarbonyl, N-isopropyl-Nmethylaminocarbonyl, dimethylaminocarbonyl, diethylaminocarbonyl, (2-hydroxyethyl)aminocarbonyl, (2-hydroxyethyl)aminocarbon 2-methylpropan-2-yl)aminocarbonyl, (carboxylmethyl)aminocarbonyl, hydroxyl group, methoxy, ethoxy, propyloxy, isopropyloxy, butyloxy, isopentyloxy, 2-isopentenyloxy, 3-isohexenyloxy, 4-methyl-3-pentenyloxy, 2-propynyloxy, trifluoromethyloxy, hydroxymethyloxy, carboxylmethyloxy, (dimethylaminocarbonyl)-methyloxy, amino, methylamino, dimethylamino, diethylamino, acetylamino, N-acetyl-N-methylamino, N-acetyl-N-ethylamino, N-acetyl-N-propylamino, Nacetyl-N-isopropylamino, N-ethylcarbonyl-N-methylamino, N-ethyl-N-(ethylcarbonyl)amino, ureido, isopropylcarbonylamino, isobutylcarbonylamino, tert-butylcarbonylamino, (ethylamino)carbonylamino, (isopropylamino)-carbonylamino, (dimethylamino)carbonylamino, (4-hydroxypiperidino)carbonylamino, [(4-hydroxypiperidino)methyl]-carbonylamino, [(3-hydroxypyrrolidinyl)methyl]carbonylamino, methylsulfonylamino, isopropylsulfonylamino, N-(methylsulfonyl)-N-methylamino, N-(ethylsulfonyl)-N-methylamino, N-(isopropylsulfonyl)-N-methylamino, N-(methylsulfonyl)-N-methylamino, N-(methylsulfonyl)-N-methylamino, N-(isopropylsulfonyl)-N-methylamino, N ethylamino, N-(methylsulfonyl)-N-propylamino, N-(ethylsulfonyl)-N-ethylamino, methylsulfonyl, isopropylsulfonyl, isobutylsulfonyl, methylsulfinyl, isopropylsulfinyl, aminosulfonyl, methylaminosulfonyl, dimethylaminosulfonyl, isopropylaminosulfonyl, tert-butylaminosulfonyl, hydroxyamidino, phenyl, 3-fluorophenyl, 4-fluorophenyl, 3-chlorophenyl, 4-chlorophenyl, 2,4-difluorophenyl, 3,4-difluorophenyl, 3,4-dichlorophenyl, 3,5-dichlorophenyl, 4-chloro-3-fluorophenyl, 4-chloro-2-fluorophenyl, 4-bromophenyl, 4-nitrophenyl, 4-cyanophenyl, 4-methylphenyl, 4-ethylphenyl, 4-pro-

pylphenyl, 4-isopropylphenyl, 4-tert-butylphenyl, 2-trifluoromethylphenyl, 4-trifluoromethylphenyl, 4-(hydroxymethyl) phenyl, 4-(2-hydroxyethyl)phenyl, 4-(methoxymethyl)phenyl, 4-(2-carboxylethyl)phenyl, 4-(methoxycarbonylmethyl) phenyl, 4-(ethoxycarbonylmethyl)phenyl, 4-acetylphenyl, 3-carboxylphenyl, 4-carboxylphenyl, 4-(methoxycarbonyl) phenyl, 4-(ethoxycarbonyl)phenyl, 4-carbamoylphenyl, 4-(methylaminocarbonyl)phenyl, 4-(isopropylaminocarbonyl) phenyl, 4-(dimethylaminocarbonyl)phenyl, 4-(diethylaminocarbonyl)phenyl, 4-[(2-hydroxyethyl)aminocarbonyl]phenyl, 4-[(carboxylmethyl)-aminocarbonyl]phenyl, 4-hydroxyphenyl, 4-methoxyphenyl, 3,4,5-trimethoxyphenyl, 4-ethoxyphenyl, 4-propyloxyphenyl, 4-isopropyloxyphenyl, 4-butyloxyphenyl, 4-isopentyloxyphenyl, 4-(2-isopentenyloxy)phenyl, 4-(3-isohexenyloxy) phenyl, 4-(4-methyl-3-pentenyloxy)phenyl, 4-(2-propynyloxy)phenyl, 4-(trifluoromethyloxy)phenyl, 4-(hydroxymethyloxy)phenyl, 4-(carboxylmethyloxy)phenyl, 4-[(dimethylaminocarbonyl)methyloxy]phenyl, 4-aminophenyl, 4-(methylamino)phenyl, 4-(dimethylaminophenyl), 4-(diethylamino)-phenyl, 4-(acetylamino)phenyl, Nacetyl-N-methylamino, 4-(N-acetyl-N-methylamino)phenyl, 4-(N-acetyl-N-ethylamino)phenyl, 4-(N-acetyl-N-propylamino)phenyl, 4-(N-acetyl-N-isopropylamino) phenyl, 4-(N-ethylcarbonyl-N-methylamino)phenyl, ethyl-N-(ethylcarbonyl)amino]phenyl, 4-(methylsulfonylamino)phenyl, 4-(methylthio)phenyl, 4-(methylsulfonyl)phenyl, 4-(methylsulfinyl)phenyl; 4-(aminosulfonyl)phenyl, 4-(methylaminosulfonyl)phenyl, 4-(dimethylaminosulfonyl)phenyl, 4-(tert-butylaminosulfonyl)phenyl, tetrazol-5-ylphenyl, cyclohexyl, benzyl, 4-chlorobenzyl, phenethyl, benzyloxy, 4-fluorobenzyloxy, 2-chlorobenzyloxy, 3-chlorobenzyloxy, 4-chlorobenzyloxy, 4-tert-butylbenzyloxy, 4-trifluoromethylbenzyloxy, phenethyloxy, 2-thienyl, 2-thiazolyl, 2-pyridyl, 3-pyridyl, 4-pyridyl, 6-fluoropyridin-3-yl, 5-fluoropyridin-2-yl, 6-chloropyridin-3-yl, 6-methylpyridin-3-yl,

2-pyrimidinyl, 5-tetrazolyl, piperidino, 2-oxopiperidin-1-yl, 2-oxopyrrolidin-1-yl, 2-imidazolin-2-yl, 2-oxoimidazolidin-1-yl, 2-oxooxazolidin-1-yl, 2-methylthiazol-4-yl, 5-methylthiazol-2-yl, 2-aminothiazol-4-yl, 3-methyl-1,2,4-oxadiazol-5-yl, 1,1-dioxoisothiazolidin-2-yl, 4,4-dimethyl-Δ²-oxazolin-2-yl, 5-chlorothiophen-2-yl, 5-methyloxazol-2-yl, 5-oxo-Δ²-1,2,4-oxadiazolin-3-yl, 5-oxo-Δ<sup>2</sup>-1,2,4-thiadiazolin-3-yl, 2-oxo-3H-1,2,3,5-oxathiadiazolin-4-yl, 4-hydroxypiperidinomethyl, piperidinocarbonyl, 4-hydroxypiperidinocarbonyl, 3,4-dihydroxypiperidinocarbonyl, 1-piperazinylcarbonyl, 1-pyrrolidinylcarbonyl, morpholinocarbonyl, 4-thiomorpholinylcarbonyl, phenoxy, 2,4-dichlorophenoxy, tetrahydropyranyloxy, 2-pyridylmethyloxy, 3-pyridylmethyloxy, 2-chloropyridin-4-ylmethyloxy, 4-pyridylmethyloxy, 2-piperidylmethyloxy, 3-piperidylmethyloxy, 4-piperidylmethyloxy, 1-methylpiperidin-4-ylmethyloxy, 1-acetylpiperidin-4-ylmethyloxy, 1-(tert-butoxycarbonyl)piperidin-4-vlmethyloxy, 1-(methylsulfonyl)piperidin-4-ylmethyloxy, 2-methylthiazolin-4-yloxy, 2,4-dimethylthiazolin-5-yloxy, dimethylaminocarbonylmethyloxy, piperidinocarbonylmethyloxy, 4-hydroxypiperidinocarbonylmethyloxy, 2-methylthiazol-4-yl, (2-methylthiazol-4-yl)methyloxy, (2,4-dimethylthiazol-5-yl)methyloxy, benzoyl, 3-fluorobenzoyl, 4-chlorobenzylamino, 3,5-dichlorobenzylamino, 4-trifluoromethylbenzylamino, 2-pyridylmethylamino, benzoylamino, 4-chlorobenzoylamino, 4-trifluoromethylbenzoylamino, 3,5-dichlorobenzoylamino, 3-nitro-4-methoxybenzoylamino, 4-nitro-3-methoxybenzoylamino, 3-pyridylcarbonylamino, morpholinocarbonylamino, 2-oxazolinylamino, 4-hydroxypiperidinosulfonyl, 4-methylphenylsulfonylamino, 2-thiazolylaminosulfonyl, 2-pyridylaminosulfonyl, benzylaminocarbonyl, N-benzyl-N-methylaminocarbonyl, (4-pyridylmethyl)aminocarbonyl or (cyclohexylmethyl)aminocarbonyl, 2-hydroxyethyloxy, 3-hydroxypropyloxy, 2-methoxyethoxy, 2-(2-methoxyethoxy)ethoxy, azetidinylcarbonyl, 3-hydroxypyrrolidinylcarbonyl, 3-hydroxypiperidinocarbonyl, 4-hydroxypiperidinocarbonyl, 3,4-dihydroxypiperidinocarbonyl, 4-methoxypiperidinocarbonyl, 4-carboxypiperidinocarbonyl, 4-(hydroxymethyl)piperidinocarbonyl, 2-oxopiperidinocarbonyl, 4-oxopiperidinocarbonyl, 2,6-dimethylpiperidinocarbonyl, 2,2,6,6-tetramethylpiperidinocarbonyl, 2,2,6,6-tetramethyl-4-hydroxypiperidinocarbonyl, 1-oxothiomorpholin-4-ylcarbonyl, 1,1-dioxothiomorpholin-4-ylcarbonyl, 1-(methylsulfonyl)piperidin-4-ylaminocarbonyl, 4-methylsulfonylpiperazinylcarbonyl, 4-methylpiperazinylcarbonyl, N,N-bis(2-hydroxyethyl)aminocarbonyl, phenylaminocarbonyl, cyclopropylaminocarbonyl, cyclobutylaminocarbonyl, cyclohexylaminocarbonyl, 4-hydroxycyclohexylaminocarbonyl, 4-methylthiazol-2-ylmethylaminocarbonyl, 2-(4-hydroxypiperidino)-ethyloxy, 2-pyridylmethylaminocarbonyl, 3-pyridylmethylaminocarbonyl, N-methyl-N-(4-pyridylmethyl) aminocarbonyl, cyclohexylmethyloxy, 4-hydroxypiperidinocarbonylmethyloxy and 4-methylthiazol-2-ylmethyloxy.

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[0178] Particularly preferable examples of the substituent include fluorine atom, chlorine atom, bromine atom, nitro, cyano, methyl, hydroxymethyl, carboxyl, carbamoyl, methylaminocarbonyl, isopropylaminocarbonyl, dimethylaminocarbonyl, diethylaminocarbonyl, (2-hydroxylethyl)aminocarbonyl, (carboxymethyl)-aminocarbonyl, methoxy, 2-isopentenyloxy, 2-propynyloxy, methylthio, methylamino, dimethylamino, acetylamino, N-acetyl-N-methylamino, N-acetyl-N-ethylamino, N-acetyl-N-propylamino, N-acetyl-N-isopropylamino, N-ethylcarbonyl-N-methylamino, N-ethyl-N-(ethylcarbonyl)amino, methylsulfonylamino, methylsulfonyl, aminosulfonyl, dimethylaminosulfonyl, tert-butylaminosulfonyl, phenyl, 3-fluorophenyl, 4-fluorophenyl, 4-chlorophenyl, 4-citrophenyl, 4-methylphenyl, 4-tert-butylphenyl, 4-trifluoromethylphenyl, 4-(methoxymethyl)-phenyl, 4-(2-hydroxylethyl)phenyl, 3-carboxylphenyl, 4-carboxylphenyl, 4-carboxylphenyl, 4-methylsulfonylphenyl, 4-carboxylphenyl, 4-methylsulfonylphenyl, 4-carboxylphenyl, 4-methylsulfonylphenyl, 4-carboxylphenyl, 4-pyridyl, 4-pyridylmethyloxy, 2-piperidylmethyloxy, 3-piperidylmethyloxy, 4-piperidylmethyloxy, 1-methylpiperidin-4-ylmethyloxy, 1-acetylpiperidin-4-ylmethyloxy, 2-chloropiperidin-4-ylmethyloxy, 1-methylsulfonyl, 4-hydroxylpiperidinocarbonyl, 4-hydroxylpiperidinocarbonyl, 1-pyrrolidinylcarbonyl, morpholinocarbonyl, 4-thiomorpholinocarbonyl, 4-hydroxylpiperidinocarbonyl, 1-pyrrolidinylcarbonyl, morpholinocarbonyl, 4-thiomorpholinocarbonyl, 4-thiomorpholinocarbonyl, 4-thiomorpholinocarbonyl, 4-hydroxylpiperidinocarbonyl, 1-pyrrolidinylcarbonyl, morpholinocarbonyl, 4-thiomorpholinocarbonyl, 4-thiomorpholinoc

pholinylcarbonyl, benzylaminocarbonyl, N-benzyl-N-methylaminocarbonyl, (4-pyridylmethyl)aminocarbonyl and (cyclohexylmethyl)aminocarbonyl.

[0179] Most preferable substituents are fluorine atom, chlorine atom, methyl, hydroxymethyl, carboxyl, carbamoyl, methylaminocarbonyl, dimethylaminocarbonyl, methoxy, methylamino, acetylamino, aminosulfonyl, dimethylaminosulfonyl, tert-butylaminosulfonyl, phenyl, 3-fluorophenyl, 4-fluorophenyl, 3-chlorophenyl, 4-chlorophenyl, 3,5-dichlorophenyl, 4-methylphenyl, 4-tert-butylphenyl, 4-trifluoromethylphenyl, 4-carboxylphenyl, 4-methoxyphenyl, 4-carbamoylphenyl, 4-methylthiophenyl, 4-(dimethylaminocarbonyl)phenyl, 4-methylsulfonylphenyl and 2-oxopyrrolidin-1-yl. [0180] The w is preferably 1 or 2, r and t are preferably 0, 1 or 2, particularly preferably 0 or 1, more preferably 0, p is preferably 1, and q is preferably 0 or 2.

10 [0181] In formula [I], when X is

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wherein each symbol is as defined above and w is 2 or above, one of Z is preferably  $C_{6-14}$  aryl optionally substituted by 1 to 5 substituent(s) selected from group D or heterocyclic group optionally substituted by 1 to 5 substituent(s) selected from group D, particularly preferably  $C_{6-14}$  aryl optionally substituted by 1 to 5 substituent(s) selected from group D.

[0182] When ring B is phenyl, w is 2 and phenyl is bonded to Y at the 1-position, one of the most preferable embodiments is that wherein Z is bonded to the 2-position and 5-position of phenyl, Z at the 2-position is  ${}^{\text{T}}C_{6-14}$  aryl optionally substituted by 1 to 5 substituent(s) selected from group D" and Z at the 5-position is "heterocyclic group optionally substituted by 1 to 5 substituent(s) selected from group D".

[0183] The pharmaceutically acceptable salt may be any as long as it forms a non-toxic salt with a compound of the above-mentioned formula [I] or [II]. Such salt can be obtained by reacting the compound with an inorganic acid, such as hydrochloric acid, sulfuric acid, phosphoric acid, hydrobromic acid and the like, or an organic acid, such as oxalic acid, malonic acid, citric acid, fumaric acid, lactic acid, malic acid, succinic acid, tartaric acid, acetic acid, trifluoroacetic acid, gluconic acid, ascorbic acid, methylsulfonic acid, benzylsulfonic acid, meglumine acid and the like, or an inorganic base, such as sodium hydroxide, potassium hydroxide, calcium hydroxide, magnesium hydroxide, ammonium hydroxide and the like, or an organic base, such as methylamine, diethylamine, triethylamine, triethanolamine, ethylenediamine, tris(hydroxymethyl)methylamine, guanidine, choline, cinchonine and the like, with an amino acid, such as lysine, arginine, alanine and the like. The present invention encompasses water-retaining product, hydrate and solvate of each compound.

[0184] The compounds of the above-mentioned formula [I] or [II] have various isomers. For example, E compound and Z compound are present as geometric isomers, and when the compound has an asymmetric carbon, an enantiomer and a diastereomer are present due to the asymmetric carbon. A tautomer may be also present. The present invention encompasses all of these isomers and mixtures thereof.

[0185] The present invention also encompasses prodrug and metabolite of each compound.

[0186] A prodrug means a derivative of the compound of the present invention, which is capable of chemical or metabolic decomposition, which shows inherent efficacy by reverting to the original compound after administration to a body, and which includes salts and complexes without a covalent bond.

[0187] When the inventive compound is used as a pharmaceutical preparation, the inventive compound is generally admixed with pharmaceutically acceptable carriers, excipients, diluents, binders, disintegrators, stabilizers, preservatives, buffers, emulsifiers, aromatics, coloring agents, sweeteners, thickeners, correctives, solubilizers, and other additives such as water, vegetable oil, alcohol such as ethanol, benzyl alcohol and the like, polyethylene glycol, glycerol triacetate, gelatin, lactose, carbohydrate such as starch and the like, magnesium stearate, talc, lanolin, petrolatum and the like, and prepared into a dosage form of tablets, pills, powders, granules, suppositories, injections, eye drops, liquids, capsules, troches, aerosols, elixirs, suspensions, emulsions, syrups and the like, which can be administered systemically or topically and orally or parenterally.

[0188] While the dose varies depending on the age, body weight, general condition, treatment effect, administration route and the like, it is from 0.1 mg to 1 g for an adult per dose, which is given one to several times a day.

[0189] The prophylaxis of hepatitis C means, for example, administration of a pharmaceutical agent to an individual found to carry an HCV by a test and the like but without a symptom of hepatitis C, or to an individual who shows an improved disease state of hepatitis after a treatment of hepatitis C, but who still carries an HCV and is associated with a risk of recurrence of hepatitis.

[0190] The therapeutic agent for hepatitis C of the present invention is expected to provide a synergestic effect when concurrently used with other antiviral agents, antiinflammatory agents or immunostimulants.

[0191] The medicaments with the prospect of synergestic effect include, for example, interferon- $\alpha$ , interferon- $\beta$ , interferon- $\gamma$ , interleukin-2, interleukin-8, interleukin-10, interleukin-12, TNF $\alpha$ , recombinant or modified products thereof, agonists, antibodies, vaccines, ribozymes, antisense nucleotides and the like.

[0192] As evidenced in the combination therapy of anti-HIV agents, which is also called a cocktail therapy, the combined use of various anti-virus agents againt viruses showing frequent genetic mutations is expected to show effect for suppressing emergence and increase of drug tolerant viruses. For example, 2 or 3 agents from HCV-IRES inhibitors, HCV-NS3 protease inhibitors, HCV-NS2NS3 protease inhibitors, HCV-NS5A inhibitors and HCV polymerase inhibitor may be used in combination. Specifically, the combined use with Ribavirin(R), interferon-α (IFN-α, Roferon(R), Intron A(R), Sumiferon(R), MultiFeron(R), Infergen(R), Omniferon(R), Pegasys(R), PEG-Intron A(R)), interferon-β (Frone(R), Rebif(R), AvoneX(R), IFNβMOCHIDA(R)), interferon-ω, 1-β-L-ribofuranosyl-1H-1,2,4-triazole-3-carboxamide, 16αbromo-3β-hydroxy-5α-androstan-17-one, 1H-imidazole-4-ethanamide dihydrochloride, HCV ribozyme Heptazyme(R), polyclonal antibody Civacir(R), lactoferrin GPX-400, (1S,2R,8R,8aR)-1,2,8-trihydroxyoctahydroindolizidinium chloride, HCV vaccine (MTH-68/B, Innivax C(R), Engerix B(R)), antisense oligonucleotide ISIS-14803, HCV-RNA transcriptase inhibitor VP-50406, tetrachlorodecaoxide (high concentration Oxoferin(R)), tetrahydrofuran-3-yl (S)-N-3-[3-(3-methoxy-4-oxazol-5-ylphenyl)ureido]benzylcarbamate, 4-amino-2-ethoxymethyl-α,α-dimethyl-1H-imidazo[4,5-c]quinoline-1-ethanol, interleukin-2 (Proleukin(R)), thymosin α1 and the like is exemplified, wherein (R) shows product names. [0193] Furthermore, the combined use with the compounds disclosed in JP-A-08-268890, JP-A-10-101591, JP-A-07-069899, WO99/61613 and the like as HCV IRES inhibitors; the compounds disclosed in WO98/22496, WO99/07733, WO99/07734, WO00/09543, WO00/09558, WO01/59929, WO98/17679, EP932617, WO99/50230, WO00/74768, WO97/43310, US5990276, WO01/58929, WO01/77113, WO02/8198, WO02/8187, WO02/8244, WO02/8256, WO01/07407, WO01/40262, WO01/64678, WO98/46630, JP-A-11-292840, JP-A-10-298151, JP-A-11-127861, JP-A-2001-103993, WO98/46597, WO99/64442, WO00/31129, WO01/32961, WO93/15730, US7832236, WO00/200400, WO02/8251, WO01/16379, WO02/7761 and the like as HCV protease inhibitors; the compounds disclosed in WO97/36554, US5830905, WO97/36866, US5633388, WO01/07027, WO00/24725 and the like as HCV helicase inhibitors; the compounds disclosed in WO00/10573, WO00/13708, WO00/18231, WO00/06529, WO02/06246, WO01/32153, WO01/60315, WO01/77091, WO02/04425, WO02/20497, WO00/04141 and the like as HCV polymerase inhibitors; the compounds disclosed in WO01/58877, JP-A-11-180981, WO01/12214 and the like as interferon agonists or enhancers; and the like is also exemplified.

[0194] Inasmuch as HCV is known to be a virus associated with many genetic mutations, a compound effective for many genotypes is one of the preferable modes. If a compound ensures high blood concentration when administered as a pharmaceutical agent to an animal infected with HCV, it is also one of the preferable modes. From these aspects, a compound having high inhibitory activity on both HCV type 1a and type 1b and high blood concentration, such as 2-{4-[2-(4-chlorophenyl)-5-(2-oxopyrrolidin-1-yl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride, is particularly preferable.

35 [0195] Examples of the production method of the compound to be used for the practice of the present invention are given in the following. However, the production method of the compound of the present invention is not limited to these examples

[0196] Even if no directly corresponding disclosure is found in the following Production Methods, the steps may be modified for efficient production of the compound, such as introduction of a protecting group into a functional group with deprotection in a subsequent step, and changing the order of Production Methods and steps.

**[0197]** The treatment after reaction in each step may be conventional ones, for which typical methods, such as isolation and purification, crystallization, recrystallization, silica gel chromatography, preparative HPLC and the like, can be appropriately selected and combined.

## 45 Production Method 1

[0198] In this Production Method, a benzimidazole compound is formed from a nitrobenzene compound.

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## **Production Method 1-1**

[0199]

wherein Hal is halogen atom, such as chlorine atom, bromine atom and the like, R<sup>c1</sup> is halogen atom, such as chlorine atom, bromine atom and the like, or hydroxyl group, and other symbols are as defined above.

## Step 1

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[0200] A compound [1] obtained by a conventional method or a commercially available compound [1] is reacted with amine compound [2] in a solvent such as N,N-dimethylformamide (DMF), acetonitrile, tetrahydrofuran (THF), toluene and the like in the presence or absence of a base such as potassium carbonate, triethylamine, potassium t-butoxide and the like at room temperature or with heating to give compound [3].

## Step 2

[0201] The compound [3] is hydrogenated in a solvent such as methanol, ethanol, THF, ethyl acetate, acetic acid, water and the like in the presence of a catalyst such as palladium carbon, palladium hydroxide, platinum oxide, Raney nickel and the like at room temperature or with heating to give compound [4]. In addition, compound [3] is reduced with a reducing agent such as zinc, iron, tin(II) chloride, sodium sulfite and the like, or reacted with hydrazine in the presence of iron(III) chloride to give compound [4]. The compound [4] can be also obtained by reacting compound [3] with sodium hydrosulfite under alkaline conditions.

## Step 3

[0202] The compound [4] is condensed with carboxylic acid compound [5] in a solvent such as DMF, acetonitrile, THF, chloroform, ethyl acetate, methylene chloride, toluene and the like using a condensing agent such as dicyclohexylcarbodiimide, 1-ethyl-3-(3-dimethylaminopropyl)carbodiimide hydrochloride, diphenylphosphoryl azide and the like and, where necessary, adding N-hydroxysuccinimide, 1-hydroxybenzotriazole and the like to give amide compound [6]. Alternatively, amide compound [6] can be obtained from compound [5] as follows. The carboxylic acid compound [5] is converted to an acid halide derived with thionyl chloride, oxalyl chloride and the like, or an active ester (e.g., mixed acid anhydride derived with ethyl chlorocarbonate and the like), which is then reacted in the presence of a base, such as triethylamine, potassium carbonate, pyridine and the like, or in an amine solvent, such as pyridine and the like, to give amide compound [6].

#### Step 4

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[0203] The compound [6] is heated in a solvent such as ethanol, methanol, toluene, DMF, chloroform and the like or without a solvent in the presence of an acid such as acetic acid, formic acid, hydrochloric acid, dilute sulfuric acid, phosphoric acid, polyphosphoric acid, p-toluenesulfonic acid and the like, a halogenating agent such as zinc chloride, phosphorus oxychloride, thionyl chloride and the like or acid anhydride such as acetic anhydride and the like, to allow cyclization to give compound [1-2].

### **Production Method 1-2**

[0204] This Production Method is an alternative method for producing compound [I-2].

Step 3

$$R^2$$
 $N$ 
 $A$ 
 $R^5$ 
 $R^4$ 
 $Cy$ 
 $R^5$ 

wherein each symbol is as defined above.

### 35 Step 1

[0205] The compound [3] obtained in the same manner as in Step 1 of Production Method 1-1 is subjected to amide condensation with compound [5] in the same manner as in Step 3 of Production Method 1-1 to give compound [7].

#### 40 Step 2

[0206] The compound [7] is reduced in the same manner as in Step 2 of Production Method 1-1 to give compound [8].

### Step 3

[0207] The compound [8] is subjected to cyclization in the same manner as in Step 4 of Production Method 1-1 to give compound [I-2].

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[0208]

wherein Rc2 is alkyl such as methyl, ethyl and the like, and other symbols are as defined above.

[0209] The compound [4] is reacted with imidate compound [9] in a solvent such as methanol, ethanol, acetic acid, DMF, THF, chloroform and the like at room temperature or with heating to give compound [I-2].

[0210] In addition, compound [4] may be reacted with aldehyde compound [10] in a solvent such as acetic acid, formic acid, acetonitrile, DMF, nitrobenzene, toluene and the like in the presence or absence of an oxidizing agent such as benzofuroxan, manganese dioxide, 2,3-dichloro-5,6-dicyano-p-benzoquinone, iodine, potassium ferricyanide and the like with heating to give compound [I-2].

[0211] Alternatively, compound [4] and carboxylic acid compound [11] may be heated to allow reaction in the presence of polyphosphoric acid, phosphoric acid, phosphorus oxychloride, hydrochloric acid and the like to give compound [I-2].

#### **Production Method 2**

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**[0212]** In this Production Method, conversion of the substituents  $(R^1, R^2, R^3, R^4)$  on the benzene ring of benzimidazole is shown. While a method of converting  $R^2$  when  $R^1$ ,  $R^3$  and  $R^4$  are hydrogen atoms is shown, this Production Method is applicable irrespective of the position of substitution.

Conversion of carboxylic acid ester moiety to amide

#### 5 [0213]

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wherein E is a single bond,  $-(CH_2)_s$ -,  $-O-(CH_2)_s$ - or  $-NH-(CH_2)_s$ - (wherein s is an integer of 1 to 6),  $R^{c3}$ ,  $R^{c4}$  and  $R^{c5}$  are  $C_{1-6}$  alkyl, and other symbols are as defined above.

#### Step 1

[0214] The compound [I-2-1] obtained in the same manner as in the above-mentioned Production Method is subjected to hydrolysis in a solvent such as methanol, ethanol, THF, dioxane and the like, or in a mixed solvent of these solvents and water under basic conditions with sodium hydroxide, potassium hydroxide, potassium carbonate, lithium hydroxide and the like or under acidic conditions with hydrochloric acid, sulfuric acid and the like to give compound [I-2-2].

### Step 2

[0215] The compound [I-2-2] is reacted with compound [12] in the same manner as in Step 3 of Production Method 1-1 to give compound [I-2-3].

### **Production Method 2-2**

Conversion of cyano group to substituted amidino group

### [0216]

NC  $\xrightarrow{N}$   $\xrightarrow{R^5}$   $\xrightarrow{NH_2OH}$   $\xrightarrow{NOH}$   $\xrightarrow{R^6}$   $\xrightarrow{R^6}$   $\xrightarrow{R^6}$   $\xrightarrow{NH_2OH}$   $\xrightarrow{H_2N}$   $\xrightarrow{II-2-5}$ 

wherein each symbol is as defined above.

[0217] The compound [I-2-4] obtained in the same manner as in the above-mentioned Production Method is reacted with hydroxylamine in a solvent such as water, methanol, ethanol, THF, DMF and the like to give compound [I-2-5]. When a salt of hydroxylamine such as hydrochloride and the like is used, the reaction is carried out in the presence of a base such as sodium hydrogencarbonate, sodium hydroxide, triethylamine and the like.

Conversion of sulfonic acid ester moiety to sulfonic acid

#### [0218]

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wherein  $R^{c6}$  is  $C_{1-6}$  alkyl, and other symbols are as defined above.

[0219] The compound [I-2-6] obtained in the same manner as in the above-mentioned Production Method is reacted with iodide salt such as sodium iodide, lithium iodide and the like, bromide salt such as sodium bromide, trimethylammonium bromide and the like, amine such as pyridine, trimethylamine, triazole and the like, phosphine such as triphenylphosphine and the like in a solvent such as DMF, dimethyl sulfoxide (DMSO), acetonitrile, methanol, ethanol, water and the like with heating to give compound [I-2-7].

### 25 Production Method 3

[0220] This Production Method relates to convertion of the substituent(s) on phenyl group at the 2-position of benzimidazole. This Production Method can be used even when phenyl is a different ring.

### 30 Production Method 3-1

Conversion of hydroxyl group to ether

### [0221]

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wherein  $R^{c7}$  is optionally substituted alkyl corresponding to  $R^{a11}$ ,  $G^1$  is a single bond, \*- $(CH_2)_n$ -, \*- $(CH_2)_n$ -O-, \*- $(CH_2)_n$ -CO- or \*- $(CH_2)_m$ -CR<sup>a15</sup>R<sup>a16</sup>)- $(CH_2)_n$ -, wherein \* show the side to be bonded to  $R^{c1}$ , and other symbols are as defined above.

[0222] When R<sup>c1</sup> of compound [13] is halogen atom, compound [I-2-8] obtained in the same manner as in the above-mentioned Production Method is reacted with compound [13] in a solvent such as DMF, DMSO, acetonitrile, ethanol, THF and the like in the presence of a base such as sodium hydride, sodium hydroxide, potassium hydroxide, potassium carbonate, sodium ethoxide, potassium t-butoxide and the like at room temperature or with heating to give compound [II-2-1].

[0223] When R<sup>c1</sup> of compound [13] is hydroxyl group, the hydroxyl group of compound [13] is converted to halogen atom with thionyl chloride, phosphorus tribromide, carbon tetrabromide-triphenylphosphine and the like and reacted with compound [I-2-8] by the aforementioned method to give compound [II-2-1]. In this case, compound [I-2-8] may be subjected to Mitsunobu reaction with compound [13] in a solvent such as DMF, acetonitrile, THF and the like using triphenylphosphine - diethyl azodicarboxylate and the like to give compound [II-2-1].

[0224] The compound [I-2-9] can be obtained in the same manner from compound [I-2-8] and compound [14].

#### **Production Method 3-2**

Conversion of nitro to substituted amino group

#### [0225]

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wherein  $R^{c8}$  is  $C_{1-6}$  alkyl,  $G^2$  is \*- $(CH_2)_n$ - or \*- $CHR^{a15}$ -,  $G^3$  is -CO-, \*- $CO_2$ -, \*-CONH- or - $SO_2$ -, and other symbols are as defined above.

### Step 1

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[0226] The nitro compound [I-2-10] obtained in the same manner as in the above-mentioned Production Method is reacted in the same manner as in Step 2 of Production Method 1-1 to give compound [I-2-11].

### Step 2

[0227] The compound [I-2-11] is alkylated with compound [15] in the same manner as in Production Method 3-1 to

give compound [II-2-2].

#### Step 3

[0228] When G<sup>3</sup> of compound [16] is -CO-, -CO<sub>2</sub>- or -CONH-, compound [I-2-11] is acylated with compound [16] in the same manner as in Step 3 of Production Method 1-1 to give compound [II-2-3].

[0229] When G<sup>3</sup> of compound [16] is -SO<sub>2</sub>-, sulfonylation is conducted using sulfonyl halide instead of acid halide used in Step 3 of Production Method 1-1 to give compound [II-2-3].

[0230] The compound [I-2-11] is acylated with compound [17] in the same manner as above to give compound [I-2-12].

[0231] This Production Method is applied in the same manner as above to give disubstituted compounds (tertiary amine) of compound [II-2-2], compound [II-2-3] and compound [I-2-12].

#### **Production Method 3-3**

Conversion of carboxylic acid ester moiety to amide

### [0232]

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[1-2-14]

R<sup>2</sup>

R<sup>1</sup>

N

R<sup>5</sup>

COOR<sup>c9</sup>

Step 1

COOH

Step 2

COOH

Step 2

N

[11-2-4]

HN-G<sup>4</sup>

R<sup>a13</sup>

Or

H<sub>2</sub>N-(CH<sub>2</sub>) - R<sup>a10</sup>

[1-2-15]

[19]

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wherein  $R^{c9}$  is  $C_{1-6}$  alkyl,  $G^4$  is #-( $CH_2$ )<sub>n</sub>-, #-( $CH_2$ )<sub>n</sub>-NH- or #-CHR<sup>a14</sup>- wherein # shows the side that is bounded to amine and other symbols are as defined above.

#### Step 1

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[0233] The compound [I-2-13] obtained in the same manner as in the above-mentioned Production Method is reacted in the same manner as in Step 1 of Production Method 2-1 to give compound [I-2-14].

#### Step 2

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[0234] The compound [I-2-14] is reacted with compound [18] in the same manner as in Step 2 of Production Method 2-1 to give compound [II-2-4].

[0235] The compound [I-2-15] is obtained from compound [I-2-14] and compound [19] in the same manner as above.

### 55 Production Method 4

[0236] In this Production Method, additional substituent(s) is(are) introduced into ring B on phenyl group that substitutes the 2-position of benzimidazole. This Production Method is applicable even when phenyl is a different ring.

Direct bonding of ring Z" to ring B

#### 5 [0237]

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wherein ring Z"-M is aryl metal compound, ring Z" moiety is optionally substituted  $C_{6-14}$  aryl or optionally substituted heterocyclic group corresponding to substituent Z, and the metal moiety contains boron, zinc, tin, magnesium and the like, such as phenylboronic acid and 4-chlorophenylboronic acid, w" is 0, 1 or 2, and other symbols are as defined above. [0238] The compound [II-2-5] obtained in the same manner as in the above-mentioned Production Method is reacted with aryl metal compound [20] in a solvent such as DMF, acetonitrile, 1,2-dimethoxyethane, THF, toluene, water and the like in the presence of a palladium catalyst such as tetrakis(triphenylphosphine)-palladium, bis(triphenylphosphine) palladium(II) dichloride, palladium acetate - triphenylphosphine and the like, a nickel catalyst such as nickel chloride, [1,3-bis(diphenylphosphino)-propane]nickel(II) chloride and the like, and a base such as potassium carbonate, potassium hydrogencarbonate, sodium hydrogencarbonate, potassium phosphate, triethylamine and the like at room temperature or with heating, to give compound [II-2-6].

#### **Production Method 4-2**

Conversion of hydroxyl group to ether

### [0239]

wherein  $R^{c10}$  is  $-R^{a20}$  or  $-(CH_2)_p$ -COR $^{a21}$  corresponding to substituent Z, and other symbols are as defined above. [0240] The compound [II-2-7] obtained in the same manner as in the above-mentioned Production Method is reacted with compound [21] in the same manner as in Production Method 3-1 to give compound [II-2-8].

Synthesis in advance of ring B part such as compound [13] in Production Method 3-1

#### [0241]

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$$R^{c12}$$
  $B$   $(Z)$   $W'$   $Z'$   $M$   $(Z)$   $W'$   $Z'$   $M$   $(Z)$   $W'$   $(Z)$   $W'$   $(Z)$   $W'$   $(Z)$   $W'$   $(Z)$   $(Z)$ 

wherein R<sup>c11</sup> is leaving group such as chlorine atom, bromine atom, iodine atom, trifluoromethanesulfonyloxy and the like, R<sup>c12</sup> is formyl, carboxyl or carboxylic acid ester such as methoxycarbonyl, ethoxycarbonyl, tert-butoxycarbonyl and the like, and other symbols are as defined above.

#### Step 1

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[0242] Commercially available compound [22] or compound [22] obtained by a conventional method is reacted with aryl metal compound [20] in the same manner as in Production Method 4-1 to give compound [23].

#### Step 2

[0243] The compound [23] obtained in the same manner as in the above-mentioned Production Method is reduced according to a conventional method to give compound [24].

[0244] For example, compound [23] is reacted with in a solvent such as methanol, ethanol, THF and the like in the presence of a reducing agent such as lithium aluminum hydride, sodium borohydride and the like under cooling to heating to give compound [24].

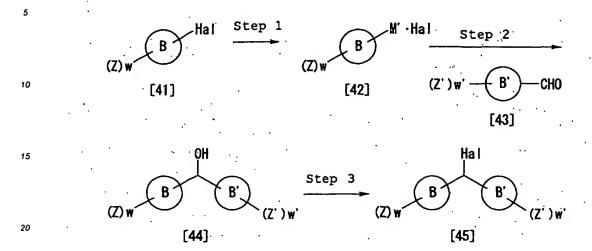
### Step 3

[0245] The compound [24] obtained in the same manner as in the above-mentioned Production Method is reacted in a solvent such as 1,4-dioxane, diethyl ether, THF, dichloromethane, chloroform, toluene and the like with a halogenating agent, such as phosphorus pentachloride, phosphorus tribromide, thionyl chloride and the like, to give compound [25]. For an accerelated reaction, the reaction may be carried out in the presence of a tertiary amine such as DMF, pyridine and the like, or under heating.

#### Step 4

[0246] The compound [24] or [25] obtained in the same manner as in the above-mentioned Production Method is reacted with compound [I-2-8] in the same manner as in Production Method 3-1 to give compound [II-2-9].

[0247]



wherein M' is a metal such as magnesium, lithium, zinc and the like, and other symbols are as defined above.

### 25 Step 1

[0248] Commercially available compound [41] or compound [41] obtained by a conventional method is converted to aryl metal reagent by a conventional method to give compound [42].

[0249] For example, when M' is magnesium, magnesium is reacted with compound [41] in a solvent such as THF, diethyl ether, benzene, toluene and the like, preferably THF, from cooling to heating preferably at -100°C to give compound [42].

#### Step 2

<sup>35</sup> [0250] The compound [42] obtained in the same manner as in the above-mentioned Production Method is reacted with compound [43] to give compound [44].

**[0251]** The compound [42] is reacted in a solvent such as diethyl ether, benzene, toluene, THF and the like, preferably THF, from cooling to room temperature, preferably at -100°C to 30°C to give compound [44].

#### 40 Step 3

[0252] The compound [44] obtained in the same manner as in the above-mentioned Production Method is halogenated in the same manner as in Step 3 of Production Method 4-3 to give compound [45].

[0253] The compound [44] is reacted with thionyl chloride and pyridine preferably in toluene solvent to give compound [45].

[0254] When compound [45] is symmetric, namely, when the ring B-(Z)w moiety and the ring B'-(Z')w' moiety are the same, compound [42] is reacted with formate such as methyl formate, ethyl formate and the like, preferably ethyl formate, in a solvent such as diethyl ether, benzene, toluene, THF and the like, preferably THF, from cooling to room temperature, preferably at -100°C to 30°C, to give compound [45].

### **Production Method 4-5**

[0255] Method including steps to introduce a protecting group into a functional group

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wherein R<sup>c13</sup> is carboxylic acid protecting group such as tert-butyl and the like, R<sup>c14</sup> is carboxylic acid protecting group such as methyl and the like and other symbols are as defined above.

### Step 1

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[0256] Commercially available compound [26] or compound [26] obtained by a conventional method is protected by a conventional method to give compound [27].

[0257] For example, when R<sup>c13</sup> is tert-butyl, compound [26] is converted to acid halide with thionyl chloride, oxalyl chloride and the like in a solvent such as THF, chloroform, dichloromethane, toluene and the like, and reacted with potassium tert-butoxide to give compound [27].

[0258] As used herein, R<sup>c13</sup> may be a different protecting group as long as it is not removed during the Step 2 or Step 3 but removed in Step 4 without affecting -CO<sub>2</sub>R<sup>c14</sup>.

#### Step 2

[0259] The methyl group of compound [27] obtained in the same manner as in the above-mentioned Production Method is converted to bromomethyl with N-bromosuccinimide and N,N'-azobisisobutyronitrile and reacted with compound [I-2-16] in the same manner as in Production Method 3-1 to give compound [II-2-10].

### Step 3

[0260] The compound [II-2-10] obtained in the same manner as in the above-mentioned Production Method is reacted with aryl metal compound [20] in the same manner as in Production Method 4-1 to give compound [II-2-11].

#### Step 4

[0261] The R<sup>c13</sup> of the compound [II-2-11] obtained in the same manner as in the above-mentioned Production Method is removed by a conventional method to give compound [II-2-12].

[0262] The protecting group of carboxylic acid can be removed by a conventional deprotection method according to the protecting group. In this Step, the conditions free from reaction of R<sup>c14</sup> are preferable. For example, when R<sup>c13</sup> is tert-butyl, compound [II-2-11] is treated with trifluoroacetic acid in a solvent such as dichloromethane, chloroform and the like to give compound [II-2-12].

#### 10 Step 5

[0263] The compound [II-2-12] obtained in the same manner as in the above-mentioned Production Method is subjected to amide condensation with compound [28] in the same manner as in Step 3 of Production Method 1-1 to give compound [II-2-13].

### Step 6

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[0264] The compound [II-2-13] obtained in the same manner as in the above-mentioned Production Method is deprotected in the same manner as in Step 1 of Production Method 2-1 to give compound [II-2-14].

20 [0265] As used herein, Rc14 is preferably a protecting group that does not react during the Step 1 through Step 5 but removed in this Step.

**[0266]** For example, when R<sup>c14</sup> is methyl, compound [II-2-13] is reacted in an alcohol solvent such as methanol, ethanol, n-propanol, isopropanol and the like or a mixed solvent of alcohol solvent and water in the presence of a base such as potassium carbonate, sodium carbonate, lithium hydroxide, sodium hydroxide, potassium hydroxide and the like from cooling to heating for deprotection, followed by acidifying the reaction solution to give compound [II-2-14].

[0267]

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R\*\*\*O<sub>2</sub>C

(1-2-16)

Ha I NO<sub>z</sub>

Step 1

Cy R<sup>6</sup> NO<sub>2</sub>

[11-2-17]

[20]

Step 2

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Step 3

Xo HA

Hal-(CH2)g-COC1

Step 4

[11-2-19] [42]

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[11-2-18]

HO<sub>2</sub>C R<sup>5</sup> O R<sup></sup>

[11-2-21]

wherein g is an integer of 1 to 5, and other sumbols are as defined above.

### Step 1

[0268] The compound [I-2-16] obtained by the above-mentioned Production Method is reacted with toluene derivative [41] in the same manner as in Step 2 of Production Method 4-5 to give compound [II-2-17].

### Step 2

45 [0269] The compound [II-2-17] obtained by the above-mentioned Production Method is reacted with aryl metal compound [20] in the same manner as in Production Method 4-1 to give compound [II-2-18].

### Step 3

[0270] The compound [II-2-18] obtained by the above-mentioned Production Method is reduced in the same manner as in Step 2 of Production Method 1-1 to give compound [II-2-19].

#### Step 4

[0271] The compound [II-2-19] obtained by the above-mentioned Production Method is amide condensed with compound [42] in the same manner as in Step 3 of Production Method 1-1 and subjected to cyclization in the same manner as in Step 1 of Production Method 1-1 to give compound [II-2-24].

### Step 5

[0272] The compound [II-2-20] obtained by the above-mentioned Production Method is hydrolyzed in the same manner as in Step 1 of Production Method 2-1 to give compound [II-2-21].

## **Production Method 4-7**

[0273]

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wherein each symbol is as defined above.

### Step 1

[0274] Commercially available product or compound [46] obtained by a conventional method is reacted with compound [20] in the same manner as in Production Method 4-1 to give compound [47].

#### Step 2

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[0275] The compound [47] obtained in the same manner as in the above-mentioned Production Method is reduced in the same manner as in the above-mentioned Production Method 4-3 Step 2 to give compound [48].

#### Step 3

[0276] The compound [48] obtained in the same manner as in the above-mentioned Production Method is reduced in the same manner as in the above-mentioned Production Method 1-1 Step 2 to give compound [49].

### Step 4

[0277] The compound [49] obtained in the same manner as in the above-mentioned Production Method is reacted with compound [42] in a solvent such as DMF, acetonitrile, THF, chloroform, ethyl acetate, methylene chloride and toluene to give compound [50]. To enhance the reaction selectivity for amino group, acetic acid and sodium acetate may be added in an equivalent amount ratio.

#### Step 5

25 [0278] The compound [50] obtained in the same manner as in the above-mentioned Production Method is subjected to cyclization reaction in the same manner as in the above-mentioned Production Method 1-1 Step 1 to give compound [51].

#### Step 6

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[0279] The compound [51] obtained in the same manner as in the above-mentioned Production Method is halogenated in the same manner as in the above-mentioned Production Method 4-3 Step 3 to give compound [52].

## Step 7

[0280] The compound [52] obtained in the same manner as in the above-mentioned Production Method is reacted in the same manner as in the above-mentioned Production Method 3-1 with compound [I-2-16] obtained in the same manner as in the above-mentioned Production Method to give compound [II-2-20].

### 40 Step 8

[0281] The compound [II-2-20] obtained in the same manner as in the above-mentioned Production Method is hydrolyzed in the same manner as in the above-mentioned Production Method 2-1 Step 1 to give compound [II-2-21].

Formation of indole ring

#### [0282]

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wherein R<sup>C15</sup> is protecting group such as trimethylsilyl, tertbutyldimethylsilyl, tert-butyldiphenylsilyl and the like, and other symbols are as defined above.

#### Step 1

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[0283] The compound [29] obtained in the same manner as in the above-mentioned Production Method or conventional method is reacted with compound [30] in a solvent such as DMF, acetonitrile, 1,2-dimethoxyethane, THF, toluene, water and the like using a palladium catalyst such as tetrakis(triphenylphosphine)palladium, bis(triphenylphosphine) palladium(II) dichloride, palladium acetate - triphenylphosphine and the like, a copper catalyst such as copper(I) iodide and the like or a mixture thereof, and in the presence of a base such as potassium carbonate, potassium hydrogencarbonate, sodium hydrogencarbonate, potassium phosphate, triethylamine and the like to give compound [31].

#### Step 2

[0284] The compound [31] obtained in the same manner as in the above-mentioned Production Method is reacted in an alcohol solvent such as methanol, ethanol and the like or a mixed solvent of an alcohol solvent and a solvent such as DMF, acetonitrile, THF, chloroform, dichloromethane, ethyl acetate, methylene chloride, toluene and the like in the presence of a base such as potassium carbonate, sodium carbonate, lithium hydroxide, sodium hydroxide, potassium hydroxide, lithium hydride, sodium hydride; potassium hydride and the like at room temperature or with heating for deprotection, and reacted with compound [32] obtained in the same manner as in Step 1 of Production Method 1-1 in the same manner as in Step 1 of Production Method 5 to give compound [33].

### Step 3

[0285] The compound [33] obtained in the same manner as in the above-mentioned Production Method was subjected to cyclization in a solvent such as DMF, acetonitrile, THF, chloroform, dichloromethane, ethyl acetate, methylene chloride, toluene and the like in the presence of a copper catalyst such as copper(I) iodide and the like or a palladium catalyst such as palladium(II) chloride and the like at room temperature or with heating to give compound [II-2-15].

Formation of imidazo[1,2-a]pyridine ring

#### [0286]

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10 (Z) w B Y A OH Step 1 Y A N 
$$R^{c17}$$
 [36]  $R^{c17}$  [37]

15 [38] Step 3 [39]  $R^{c17}$  [40]

20  $R^{c17}$  [39]  $R^{c17}$  [40]

wherein  $R^{c16}$  and  $R^{c17}$  are each independently alkyl, such as methyl, ethyl and the like, and other symbols are as defined above.

## Step 1

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[0287] The compound [34] obtained by the above-mentioned Production Method or a conventional method is subjected to amide condensation with compound [35] in the same manner as in Step 3 of Production Method 1-1 to give compound [36].

### Step 2

[0288] The compound [36] obtained by the above-mentioned Production Method is reacted with Grignard reagent [37] obtained by a conventional method to give compound [38].

[0289] Alternatively, an acid halide of compound [34] may be used instead of compound [36].

### Step 3

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[0290] The compound [38] obtained by the above-mentioned Production Method is subjected to halogenation by a conventional method to give compound [39].

[0291] For example, when Hal is a bromine atom, compound [38] is reacted with bromine under cooling or at room temperature in a solvent such as DMF, acetonitrile, THF, chloroform, dichloromethane, ethyl acetate, toluene and the like to give compound [39].

[0292] Alternatively, a halogenating agent such as hypohalite (e.g., hypochlorite and the like), N-bromosuccinimide and the like may be used instead of bromine for halogenation.

#### Step 4

[0293] The compound [39] obtained by the above-mentioned Production Method is subjected to cyclization with compound [40] obtained by a conventional or known method (JP-A-8-48651) in the presence of a base such as potassium carbonate, sodium carbonate, lithium hydroxide, sodium hydroxide, potassium hydroxide, lithium hydride, sodium hydride, potassium hydride and the like in a solvent or without a solvent at room temperature or with heating to give compound [II-2-16].

[0294] In the compounds of the formulas [I] and [II], a desired heterocyclic group can be formed according to a method similar to the methods disclosed in known publications. Examples of such heterocyclic group and reference publications are recited in the following.

5-oxo- $\Delta^2$ -1,2,4-oxadiazolin-3-yl (or 2,5-dihydro-5-oxo-4H-1,2,4-oxadiazol-3-yl), 5-oxo- $\Delta^2$ -1,2,4-thiadiazolin-3-yl (or 2,5-dihydro-5-oxo-4H-1,2,4-thiadiazol-3-yl), 2-oxo- $\Delta^3$ -1,2,3, 5-oxathiadiazolin-4-yl (or 2-oxo- $\Delta^3$ -1,2,4-oxathiadiazol-4-yl): Journal of Medicinal Chemistry, 39(26), 5228-35, 1996, 5-oxo- $\Delta^2$ -1,2,4-triazolin-3-yl: J Org Chem, 61(24), 8397-8401, 1996, 1-oxo- $\Delta^3$ -1,2,3,5-thiatriazolin-4-yl: Liebigs Ann Chem, 1376, 1980, 3-oxo- $\Delta^4$ -1,2,4-oxadiazolin-5-yl: EP145095, 5-oxo- $\Delta^2$ -1,3,4-oxadiazolin-2-yl: J Org Chem, 20, 412, 1955, 5-oxo- $\Delta^3$ -1,2,4-dioxazolin-3-yl: J Prakt Chem, 314, 145, 1972, 3-oxo- $\Delta^4$ -1,2,4-thiadiazolin-5-yl: JP-A-61-275271, 5-oxo- $\Delta^3$ -1,2,4-dithiazolin-3-yl: J Org Chem, 61(19), 6639-6645, 1996, 2-oxo- $\Delta^4$ -1,3,4-dioxazolin-5-yl: J Org Chem, 39, 2472, 1974, 2-oxo- $\Delta^4$ -1,3,4-oxathiazolin-5-yl: J Med Chem, 35(20), 3691-98, 1992, 5-oxo- $\Delta^2$ -1,3,4-thiadiazolin-2-yl: J Prakt Chem, 332(1), 55, 1990, 5-oxo- $\Delta^2$ -1,4,2-oxathiazolin-3-yl: J Org Chem, 31, 2417, 1966, 2-oxo- $\Delta^4$ -1,3,4-dithiazolin-5-yl: Tetrahedron Lett, 23, 5453, 1982, 2-oxo- $\Delta^4$ -1,3,2,4-dioxathiazolin-5-yl: Tetrahedron Lett, 319, 1968, 3,5-dioxoisooxazolidin-4-yl: Helv Chim Acta, 1973, 48, 1965, 2,5-dioxoimidazolidin-4-yl: Heterocycles, 5, 391, 1983, 2,4-dioxooxazolidin-5-yl: J Am Chem Soc, 73, 4752, 1951, 4-oxo-2-thioxooxazolidin-5-yl: Chem Ber, 91, 300,. 1958, 2,4-dioxothiazolidin-5-yl: JP-A-57-123175, 4-oxo-2-thioxothiazolidin-5-yl: Chem Pharm Bull, 30, 3563, 1982,

[0295] The Production Methods shown in the above-mentioned Production Methods 2 to 4 can be used for the synthesis of compounds other than benzimidazole of the formulas [I] and [II], such as compounds [II-2-15] and [II-2-16].

[0296] The compounds of the formulas [I], [II] and [III], 4-(4-fluorophenyl)-5-hydroxymethyl-2-methylthiazole and 4-(4-fluorophenyl)-5-chloromethyl-2-methylthiazole and production methods thereof of the present invention are explained in detail in the following by way of Examples. It is needless to say that the present invention is not limited by these Examples.

#### Example 1

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Production of ethyl 2-[4-(3-bromophenoxy)phenyl]-1-cyclohexylbenzimidazole-5-carboxylate

Step 1: Production of ethyl 4-chloro-3-nitrobenzoate

[0297] 4-Chloro-3-nitrobenzoic acid (300 g) was dissolved in ethyl alcohol (1500 ml) and concentrated sulfuric acid (100 ml) was added with ice-cooling. The mixture was refluxed under heating for 7 hr. The reaction mixture was poured into ice-cold water and the precipitated crystals were collected by filtration to give the title compound (332 g, yield 97%). 

1H-NMR (300MHz, CDCl<sub>3</sub>): 8.50(1H, d, J=2.1Hz), 8.16(1H, dd, J=8.4, 2.1Hz), 7.63(1H, d, J=8.4Hz), 4.43(2H, q, J=7.5Hz), 1.42(3H, t, J=7.5Hz)

Step 2: Production of ethyl 4-cyclohexylamino-3-nitrobenzoate

[0298] Ethyl 4-chloro-3-nitrobenzoate (330 g) obtained in the previous step was dissolved in acetonitrile (1500 ml), and cyclohexylamine (220 g) and triethylamine (195 g) were added. The mixture was refluxed under heating overnight. The reaction mixture was poured into ice-cold water and the precipitated crystals were collected by filtration to give the title compound (400 g, yield 94%).

<sup>1</sup>H-NMR (300MHz, CDCl<sub>3</sub>): 8.87(1H, d, J=2.1Hz), 8.35-8.46(1H, m), 8.02(1H, dd, J=9.1, 2.1Hz), 6.87(1H, d, J=9.1Hz), 4.35(2H, q, J=7.1Hz), 3.65-3.50(1H, m), 2.14-1.29(10H, m), 1.38(3H, t, J=7.1Hz)

Step 3: Production of ethyl 3-amino-4-cyclohexylaminobenzoate

[0299] Ethyl 4-cyclohexylamino-3-nitrobenzoate (400 g) obtained in the previous step was dissolved in ethyl acetate (1500 ml) and ethyl alcohol (500 ml), and 7.5% palladium carbon (50% wet, 40 g) was added. The mixture was hydrogenated for 7 hr at atmospheric. pressure. The catalyst was filtered off and the filtrate was concentrated under reduced pressure. Diisopropyl ether was added to the residue and the precipitated crystals were collected by filtration to give

the title compound (289 g, yield 80%).

<sup>1</sup>H-NMR (300MHz, CDCl<sub>3</sub>): 7.57(1H, dd, J=8.4, 1.9Hz), 7.41(1H, d, J=1.9Hz), 6.59(1H, d, J=8.4Hz), 4.30(2H, q, J=7.1Hz), 3.40-3.30(1H, m), 2.18-2.02(2H, m), 1.88-1.15(8H, m), 1.35(3H, t, J=7.1Hz)

Step 4: Production of ethyl 3-[4-(3-bromophenoxy)benzoyl]amino-4-cyclohexylaminobenzoate

[0300] 4-(3-Bromophenoxy)benzoic acid (74 g) was dissolved in chloroform (500 ml), and oxalyl chloride (33 ml) and dimethylformamide (catalytic amount) were added. The mixture was stirred for 4 hr at room temperature. The reaction mixture was concentrated under reduced pressure and dissolved in dichloromethane (150 ml). The resulting solution was added dropwise to a solution of ethyl 3-amino-4-cyclohexylaminobenzoate (66 g) obtained in the previous step in dichloromethane (500 ml) and triethylamine (71 ml), and the mixture was stirred for 1 hr at room temperature. The reaction mixture was poured into water and extracted with dichloromethane. The organic layer was washed with saturated brine, dried over anhydrous magnesium sulfate, and concentrated under reduced pressure. Diethyl ether was added to the residue for crystallization and the crystals were collected by filtration to give the title compound (129 g, yield 95%).

 $^{1}$ H-NMR (300MHz, CDCl<sub>3</sub>): 8.00-7.78(4H, m), 7.66(1H, brs), 7.37-7.18(3H, m), 7.13-6.59(3H, m), 6.72(1H, d, J=8.7Hz), 4.50(1H, brs), 4.29(2H, q, J=7.2Hz), 3.36(1H, m), 2.12-1.96(2H, m), 1, 83-1.56(3H, m), 1.47-1.12(5H, m), 1.37(3H, t, J=7.2Hz)

Step 5: Production of ethyl 2-[4-(3-bromophenoxy)phenyl]-1-cyclohexylbenzimidazole-5-carboxylate

[0301] Ethyl 3-[4-(3-bromophenoxy)benzoyl]amino-4-cyclohexylaminobenzoate (129 g) obtained in the previous step was suspended in acetic acid (600 ml) and the resulting suspension was refluxed under heating for 3 hr. The reaction mixture was concentrated under reduced pressure. Water was added to the residue and the precipitated crystals were collected by filtration to give the title compound (124 g. vield 99%).

1H-NMR (300MHz, CDCl<sub>3</sub>): 8.51(1H, d, J=1.5Hz), 8.00(1H, dd, J=8.4, 1.5Hz), 7.67(1H, d, J=8.4Hz), 7.63(2H, d, J=8.7Hz), 7.35-7.21(3H, m), 7.17(2H, d, J=8.7Hz), 7.14(1H, m), 4.42(2H, q, J=7.2Hz), 4.38(1H, m), 2.43-2.22(2H, m), 2.07-1.87(4H, m), 1.80(1H, m), 1.42(3H, t, J=7.2Hz), 1.40-1.27(3H, m)

### 30 Example 2

Production of 2-[4-(3-bromophenoxy)phenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid

[0302] Ethyl 2-[4-(3-bromophenoxy)phenyl]-1-cyclohexylbenzimidazole-5-carboxylate (1.0 g) obtained in Example 1 was dissolved in tetrahydrofuran (10 ml) and ethyl alcohol (10 ml), and 4N sodium hydroxide (10 ml) was added. The mixture was refluxed under heating for 1 hr. The reaction mixture was concentrated under reduced pressure and water was added to the residue. The mixture was acidified with 6N hydrochloric acid and the precipitated crystals were collected by filtration to give the title compound (0.9 g, yield 96%). melting point: 255-256°C

FAB-Ms: 491(MH+)

 $^{1}\text{H-NMR}$  (300MHz, DMSO-d<sub>6</sub>): (12.75(1H, brs), 8.24(1H, s), 7.96(1H, d, J=8.7Hz), 7.86(1H, d, J=8.7Hz), 7.71(2H, d, J=8.6Hz), 7.47-7.34(3H, m), 7.24(2H, d, J=8.6Hz), 7.20(1H, m), 4.31(1H, m), 2.38-2.18(2H, m), 2.02-1.79(4H, m), 1.65 (1H, m), 1.44-1.20(3H, m)

### 45 Example 3

Production of ethyl 1-cyclohexyl-2-(4-hydroxyphenyl)benzimidazole-5-carboxylate

[0303] Ethyl 3-amino-4-cyclohexylaminobenzoate (130 g) obtained in Example 1, Step 3, and methyl 4-hydroxybenzimidate hydrochloride (139 g) were added to methyl alcohol (1500 ml), and the mixture was refluxed under heating for 4 hr. The reaction mixture was allowed to cool and the precipitated crystals were collected by filtration to give the title compound (131 g, yield 72%).

<sup>1</sup>H-NMR (300MHz, CDCl<sub>3</sub>): 10.02(1H, brs), 8.21(1H, d, J=1.4Hz), 7.93(1H, d, J=8.6Hz), 7.83(1H, dd, J=8.6, 1.4Hz), 7.48(2H, d, J=8.6Hz), 6.95(2H, d, J=8.6Hz), 4.39-4.25(1H, m), 4.33(1H, q, J=7.0Hz), 2.35-2.18(2H, m), 1.98-1.79(4H, m), 1.70-1.60(1H, m), 1.46-1.19(3H, m), 1.35(3H, t, J=7.0Hz)

#### Example 4

Production of ethyl 2-[4-(2-bromo-5-chlorobenzyloxy)phenyl]-1-cyclohexylbenzimidazole-5-carboxylate

[0304] 2-Bromo-5-chlorobenzyl bromide prepared from 2-bromo-5-chlorotoluene (50 g), N-bromosuccinimide and N,N'-azobisisobutyronitrile, and ethyl 1-cyclohexyl-2-(4-hydroxyphenyl)benzimidazole-5-carboxylate (50 g) obtained in Example 3 were suspended in dimethylformamide (300 ml). Potassium carbonate (38 g) was added and the mixture was stirred for 1 hr at 80°C with heating. The reaction mixture was allowed to cool and then added to a mixed solvent of water-ethyl acetate. The precipitated crystals were collected by filtration to give the title compound (50 g, yield 64%).
 1H-NMR (300MHz, CDCl<sub>3</sub>): 8.50(1H, d, J=1.4Hz), 7.97(1H, dd, J=8.6, 1.4Hz), 7.70-7.57(5H, m), 7.20(1H, dd, J=8.4, 2.5Hz), 7.14(2H, d, J=8.7Hz), 5.17(2H, s), 4.46-4.30(1H, m), 4.41(2H, q, J=7.1Hz), 2.40-2.20(2H, m), 2.02-1.21(8H, m), 1.42(3H, t, J=7.1Hz)

#### Example 5

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Production of ethyl 2-{4-[2-(4-chlorophenyl)-5-chlorobenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylate

[0305] Ethyl 2-[4-(2-bromo-5-chlorobenzyloxy)phenyl]-1-cyclohexylbenzimidazole-5-carboxylate (49 g) obtained in Example 4, 4-chlorophenylboronic acid (18 g) and tetrakis-(triphenylphosphine)palladium (10 g) were suspended in 1,2-dimethoxyethane (600 ml). Saturated aqueous sodium hydrogencarbonate solution (300 ml) was added and the mixture was refluxed under heating for 2 hr. Chloroform was added to the reaction mixture. The organic layer was washed successively with saturated aqueous sodium hydrogencarbonate solution, water and saturated brine, dried over anhydrous magnesium sulfate, and concentrated under reduced pressure. The residue was purified by silica gel flash chromatography (developing solvent, chloroform:ethyl acetate = 97:3). Ethyl acetate and diisopropyl ether were added to the resulting oil for crystallization and the resulting crystals were collected by filtration to give the title compound (44 g, yield 85%).

<sup>1</sup>H-NMR (300MHz,  $CDCI_3$ ): 8.49(1H, d, J=1.4Hz), 7.97(1H, dd, J=8.6, 1.6Hz), 7.70-7.60(2H, m), 7.55(2H, d, J=8.7Hz), 4.95(2H, s), 4.48-4.28(1H, m), 4.40(2H, m), 2.02-1.20(8H, m), 1.41(3H, t, J=7.1Hz)

### 30 Example 6

Production of 2-{4-[2-(4-chlorophenyl)-5-chlorobenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid

[0306] Ethyl 2-{4-[2-(4-chlorophenyl)-5-chlorobenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylate (43 g) obtained in Example 5 was treated in the same manner as in Example 2 to give the title compound (33 g, yield 76%). melting point: 243-244°C

FAB-Ms: 571(MH+)

 $^{1}$ H-NMR (300MHz, DMSO-d<sub>6</sub>): 8.32(1H, s), 8.28(1H, d, J=8.9Hz), 8.05(1H, d, J=8.8Hz), 7.76-7.72(3H, m), 7.58-7.46 (5H, m), 7.40(1H, d, J=8.3Hz), 7.24(2H, d, J=8.9Hz), 5.11(2H, s), 4.36(1H, m), 2.40-2.15(2H, m), 2.15-1.95(2H, m), 1.95-1.75(2H, m), 1.75-1.55(1H, m), 1.55-1.15(3H, m)

#### Example 7

Production of ethyl 2-[4-(2-bromo-5-methoxybenzyloxy)phenyl]-1-cyclohexylbenzimidazole-5-carboxylate

[0307] Ethyl 1-cyclohexyl-2-(4-hydroxyphenyl)benzimidazole-5-carboxylate obtained in Example 3 and 2-bromo-5-methoxybenzyl bromide were treated in the same manner as in Example 4 to give the title compound (59 g).

### Example 8

 $Production \ of \ ethyl \ 2-\{4-[2-(4-chlorophenyl)-5-methoxybenzyloxy] phenyl\}-1-cyclohexylbenzimidazole-5-carboxylate$ 

[0308] Ethyl 2-[4-(2-bromo-5-methoxybenzyloxy)phenyl]-1-cyclohexylbenzimidazole-5-carboxylate obtained in Example 7 was treated in the same manner as in Example 5 to give the title compound (48 g, yield 77%).

<sup>1</sup>H-NMR (300MHz, CDCl<sub>3</sub>): 8.49(1H, d, J=1.4Hz), 7.97(1H, dd, J=8.6, 1.4Hz), 7.64(1H, d, J=8.6Hz), 7.54(2H, d, J=8.7Hz), 7.37(2H, d, J=8.6Hz), 7.31(2H, d, J=8.6Hz), 7.25(1H, d, J=8.4Hz), 7.19(1H, d, J=2.7Hz), 7.00(2H, d, J=8.7Hz), 6.97(1H, dd, J=8.4, 2.7Hz), 4.98(2H, s), 4.41(2H, q, J=7.1Hz), 4.42-4.29(1H, m), 3.88(3H, s), 2.40-2.20(2H, m), 2.01-1.88(4H, m), 1.83-1.73(1H, m), 1.42(3H, t, J=7.1Hz), 1.41-1.25(3H, m)

#### Example 9

Production of 2-{4-[2-(4-chlorophenyl)-5-methoxybenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid

[0309] Ethyl 2-{4-[2-(4-chlorophenyl)-5-methoxybenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylate (52 g) obtained in Example 8 was treated in the same manner as in Example 2 to give the title compound (44 g, yield 89%). melting point: 248-249°C

FAB-Ms: 568 (MH+) <sup>1</sup>H-NMR (300MHz, DMSO-d<sub>6</sub>): 8.20(1H, s), 7.88(1H, d, J=8.7Hz),

7.85(1H, d, J=8.7Hz), 7.57(d, 2H, J=8.6Hz), 7.46(2H, d, J=8.6Hz), 7.44(2H, d, J=8.6Hz), 7.29(1H, d, J=8.5Hz), 7.24 (1H, d, J=2.6Hz), 7.11(2H, d, J=8.6Hz), 7.06(1H, dd, J=8.5, 2.6Hz), 5.04(2H, s), 4.26(1H, m), 3.83(3H, s), 2.38-2.29 (2H, m)

### Example 10

Production of ethyl 1-cyclohexyl-2-{4-[(E)-2-phenylvinyl]phenyl}benzimidazole-5-carboxylate

[0310] Ethyl 3-amino-4-cyclohexylaminobenzoate (500 mg) obtained in Example 1, Step 3, was dissolved in methyl alcohol (6 ml) and trans-4-stilbenecarbaldehyde (397 mg) was added under ice-cooling. The mixture was stirred overnight at room temperature. The reaction mixture was ice-cooled and benzofuroxan (259 mg) dissolved in acetonitrile (2 ml) was added. The mixture was stirred for 7 hr at 50°C. The reaction mixture was ice-cooled. After 1N sodium hydroxide (0.1 ml) was added, ethyl acetate was added and the mixture was extracted. The organic layer was washed with water and saturated brine, dried over anhydrous magnesium sulfate, and concentrated under reduced pressure. The residue was purified by silica gel flash chromatography (developing solvent, n-hexane:ethyl acetate = 4:1) to give the title compound (540 mg, yield 63%).

<sup>1</sup>H-NMR (300MHz, DMSO-d<sub>6</sub>): 8.28(1H, d, J=1.4Hz), 8.01(1H, d, J=8.7Hz), 7.90-7.80(3H, m), 7.75-7.65(4H, m), 7.50-7.25(5H, m), 4.35(2H, q, J=7.0Hz), 4.31(1H, m), 2.40-2.20(2H, m), 2.00-1.80(4H, m), 1.63(1H, m), 1.40-1.20(3H, m), 1.36(3H, t, J=7.0Hz)

#### Example 11

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Production of 1-cyclohexyl-2-{4-[(E)-2-phenylvinyl]phenyl}benzimidazole-5-carboxylic acid

[0311] Ethyl 1-cyclohexyl-2-{4-[(E)-2-phenylvinyl]phenyl}benzimidazole-5-carboxylate (127 mg) obtained in Example 10 was treated in the same manner as in Example 2 to give the title compound (116 mg, yield 97%). melting point: not lower than 300°C

FAB-Ms: 423(MH+)

 $^{1}$ H-NMR (300MHz, DMSO-d<sub>6</sub>): 8.25(1H, s), 7.96-7.29(13H, m), 4.33(1H, brt), 2.41-2.23(2H, m), 2.03-1.78(4H, m), 1.71-1.59(1H, m), 1.49-1.20(3H, m)

### 40 Example 12

Production of 2-(4-benzyloxyphenyl)-1-cyclopentylbenzimidazole-5-carboxylic acid

[0312] In the same manner as in Examples 1 and 2, the title compound (700 mg) was obtained. FAB-Ms: 413(MH+)

 $^{1}$ H-NMR (300MHz, CDCl<sub>3</sub>): 8.60(1H, s), 8.04(1H, d, J=9.0Hz), 7.63(2H, d, J=8.4Hz), 7.51-7.32(6H, m), 7.14(2H, d, J=9.0Hz), 5.16(2H, s), 5.03-4.89(1H, m), 2.41-1.63(8H, m)

### Example 13

Production of 2-(4-benzyloxyphenyl)-1-cyclopentylbenzimidazole-5-carboxamide

[0313] 2-(4-Benzyloxyphenyl)-1-cyclopentylbenzimidazole-5-carboxylic acid (700 mg) obtained in Example 12 was dissolved in dimethylformamide (10 ml), and ammonium chloride (108 mg), 1-ethyl-3-(3-dimethylaminopropyl)carbodiimide hydrochloride (390 mg), 1-hydroxybenzotriazole (275 mg) and triethylamine (0.3 ml) were added. The mixture was stirred overnight at room temperature. Water was added to the reaction mixture and the mixture was extracted with ethyl acetate. The organic layer was washed successively with saturated aqueous sodium hydrogencarbonate, water and saturated brine, dried over anhydrous magnesium sulfate, and concentrated under reduced pressure. Ethyl

acetate and diisopropyl ether were added to the residue for crystallization and the crystals were collected by filtration to give the title compound (571 mg, yield 81%).

melting point: 232-233°C

FAB-Ms: 412(MH+)

<sup>1</sup>H-NMR (300MHz, CDCl<sub>3</sub>): 8.23(1H, d, =1.5Hz), 7.86(1H, dd, J=8.5, 1.5Hz), 7.65-7.30(8H, m), 7.13(2H, d, J=8.8Hz), 5.16(2H, s), 4.93(1H, quint, J=8.8Hz), 2.40-1.60(8H, m)

#### Example 14

Production of 2-(4-benzyloxyphenyl)-5-cyano-1-cyclopentylbenzimidazole

[0314] In the same manner as in Example 1, the title compound (400 mg) was obtained.

FAB-Ms: 394(MH+)

 $^{1}$ H-NMR (300MHz, CDCl<sub>3</sub>): 8.11(1H, s), 7.68-7.30(9H, m), 7.13(2H, s), 5.16(2H, s), 4.94(1H, quint, J=8.9Hz), 2.35-1.60 (8H, m)

#### Example 15

Production of 2-(4-benzyloxyphenyl)-1-cyclopentylbenzimidazole-5-carboxamide oxime

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[0315] 2-(4-Benzyloxyphenyl)-5-cyano-1-cyclopentylbenzimidazole (400 mg) obtained in Example 14 was suspended in ethyl alcohol (3 ml) and water (1.5 ml), and hydroxylamine hydrochloride (141 mg) and sodium hydrogencarbonate (170 mg) were added. The mixture was refluxed under heating overnight. The reaction mixture was allowed to cool and the precipitated crystals were collected by filtration to give the title compound (312 mg, yield 71%).

25 melting point: 225-226°C

FAB-Ms: 456(MH+)

<sup>1</sup>H-NMR (300MHz, DMSO- $d_6$ ): 8.20(1H, s), 7.50-7.31(9H, m), 7.12(2H, d, J=8.7Hz), 5.15(2H, s), 4.94(1H, quint, J=8.7Hz), 3.61(3H, s), 3.40(3H, s), 2.41-1.42(8H, m)

30 Example 16

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Production of ethyl 1-cyclohexyl-2-{4-[{4-(4-fluorophenyl)-2-methyl-5-thiazolyl}methoxy]phenyl}benzimidazole-5-carboxylate

35 Step 1: Production of 4-(4-fluorophenyl)-5-hydroxymethyl-2-methylthiazole

[0316] Ethyl 4-(4-fluorophenyl)-2-methyl-5-thiazolecarboxylate (59 g) prepared by a known method (Chem. Pharm. Bull., 43(6), 947, 1995) was dissolved in tetrahydrofuran (700 ml). Lithium aluminum hydride (13 g) was added under ice-cooling and the mixture was stirred for 30 min. Water (13 ml), 15% sodium hydroxide (13 ml) and water (39 ml) were added successively to the reaction mixture, and the precipitated insoluble materials were filtered off. The filtrate was concentrated under reduced pressure to give the title compound (37 g, yield 71%).

1H-NMR (300MHz, CDCl<sub>3</sub>): 7.60(2H, dd, J=8.7, 6.6Hz), 7.11(2H, t, J=8.7Hz), 4.80(2H, s), 2.70(3H, s)

Step 2: Production of 5-chloromethyl-4-(4-fluorophenyl)-2-methylthiazole

[0317] 4-(4-Fluorophenyl)-5-hydroxymethyl-2-methylthiazole (37 g) obtained in the previous step was dissolved in chloroform (500 ml), and thionyl chloride (24 ml) and pyridine (2 ml) were added. The mixture was stirred for 3 hr at room temperature. The reaction mixture was poured into ice-cold water. The mixture was extracted with chloroform, and washed with water and saturated brine. The organic layer was dried over sodium sulfate, and concentrated under reduced pressure to give the title compound (29 g, yield 76%).

<sup>1</sup>H-NMR (300MHz, CDCl<sub>3</sub>): 7.67(2H, dd, J=8.8, 5.4Hz), 7.16(2H, t, J=8.7Hz), 4.79(2H, s), 2.73(3H, s)

Step 3: Production of ethyl 1-cyclohexyl-2-{4-[{4-(4-fluorophenyl)-4-methyl-5-thiazolyl}methoxy]phenyl} benzimidazole-5-carboxylate

[0318] 5-Chloromethyl-4-(4-fluorophenyl)-2-methylthiazole (28 g) obtained in the previous step and ethyl 1-cyclohexyl-2-(4-hydroxyphenyl)benzimidazole-5-carboxylate (36 g) obtained in Example 3 were treated in the same manner as in Example 4 to give the title compound (61 g, yield 100%).

APCI-Ms: 570 (MH+)

 $^{1}$ H-NMR (300MHz, DMSO- $^{1}$ d<sub>6</sub>): 8.25(1H, d, J=1.5Hz), 7.97(1H, d, J=8.7Hz), 7.86(1H, dd, J=8.6, 1.6Hz), 7.74(2H, dd, J=8.6), 7.86(1H, dd, J=8.6), 7.86(1H, dd, J=8.6), 7.74(2H, dd, J=8.6), 7.86(1H, dd, J=8.6), 7. J=8.8, 5.5Hz), 7.62(2H, d, J=8.7Hz), 7.33(2H, t, J=8.9Hz), 7.22(2H, t, J=8.9Hz), 5.41(2H, s), 4.34(2H, q, J=7.1Hz), 4.31(1H, m), 2.71(3H, s), 2.40-2.15(2H, m), 2.05-1.75(4H, m), 1.55-1.15(3H, m), 1.36(3H, t, J=7.1Hz)

Example 17

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Production of 1-cyclohexyl-2-{4-[{4-(4-fluorophenyl)-2-methyl-5-thiazolyl}methoxy]phenyl}benzimidazole-5-carboxylic

[0319] Ethyl 1-cyclohexyl-2-{4-[{4-(4-fluorophenyl)-4-methyl-5-thiazolyl}methoxy]phenyl}benzimidazole-5-carboxylate (60 g) obtained in Example 16 was treated in the same manner as in Example 2 to give the title compound (39g, yield 69%).

melting point: 196-198°C

FAB-Ms: 542 (MH+)

<sup>1</sup>H-NMR (300MHz, DMSO-d<sub>6</sub>): 13.1(1H, brs), 8.34(1H, s), 8.29(1H, d, J=8.8Hz), 8.06(1H, d, J=8.7Hz), 7.80-7.72(4H, m), 7.36-7.31(4H, m), 5.46(2H, s), 4.38(1H, m), 2.72(3H, s), 2.45-2.15(2H, m), 2.15-1.95(2H, m), 1.95-1.75(2H, m), 1.75-1.55(1H, m), 1.55-1.20(3H, m)

20 Example 18

Production of ethyl 1-cyclohexyl-2-(2-fluoro-4-hydroxyphenyl)benzimidazole-5-carboxylate

[0320] In the same manner as in Example 3, the title compound (50 g) was obtained.

Example 19

Production of ethyl 2-{4-[bis(3-fluorophenyl)methoxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylate

Step 1: Production of 3,3'-difluorobenzhydrol 30

> [0321] To a stirred solution of magnesium strip (35.4 g) in THF (200 ml), iodine strip was added and the mixture was heated with stirring under nitrogen stream until most of color of iodine was disappeared. A solution of 3-fluoro-bromobenzene (250.0 g) in THF (1000 ml) was added dropwise over 2.5 hr while the temperature of the solution was maintained at 60°C. After the completion of the addition of the solution, the resulting mixture was refluxed for 1 hr with heating. The resulting Grignard solution was ice-cooled and a solution of ethyl formate (63.2 g) in THF (200 ml) was added dropwise over 1 hr. After a stirring of the reaction solution for an additional 30 min, saturated aqueous ammonium chloride solution (700 ml) was added dropwise with ice-cooling and water (300 ml) was added. The mixture was stirred for 10 min. The organic layer and water layer were separated. Water layer was extracted with ethyl acetate, and the combined organic layer was washed with 2N hydrochloric acid, saturated aqueous sodium hydrogencarbonate and saturated brine. The organic layer was dried over anhydrous magnesium sulfate, filtered, and the solvent was evaporated off under reduced pressure to give the title compound (156.2 g, yield 99%). <sup>1</sup>H-NMR (300MHz, CDCl<sub>3</sub>): 7.31(2H, td, J=7.9, 5.8Hz), 7.15-7.80(4H, m), 6.97-6.94(2H, m), 5.82(1H, d, J=3.3Hz), 2.30

(1H, d, J=3.3Hz)

Step 2: Production of 3,3'-difluorobenzhydryl chloride

[0322] To a solution of 3,3'-difluorobenzhydrol (150.0 g) obtained in the previous step in toluene (400 ml), pyridine (539 mg) was added at room temperature. To the solution, thionyl chloride (89.1 g) was added dropwise over 1 hr at room temperature and the resulting solution was stirred for an additional 2 hr. The solution was heated so that the temperature of the solution was at 40°C, and then stirred for an additional 1.5 hr. Thionyl chloride (8.1 g) was added again and the mixture was stirred for 30 min. To the reaction mixture, water was added. The organic layer was separated, and washed with water, saturated aqueous sodium hydrogencarbonate and saturated brine. The organic layer was dried over anhydrous magnesium sulfate, filtered, the solvent was evaporated off under reduced pressure to give the title compound (158.2 g, yield 97%).

<sup>1</sup>H-NMR (300MHz, CDCl<sub>3</sub>): 7.32(2H, td, J=8.0, 5.9Hz), 7.18-7.10(4H, m), 7.01(2H, tdd, J=8.2, 2.5, 1.2Hz), 6.05(1H, s)

Step 3: Production of ethyl 2-{4-[bis(3-fluorophenyl)methoxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylate

[0323] Ethyl 1-cyclohexyl-2-(2-fluoro-4-hydroxyphenyl)-benzimidazole-5-carboxylate (50 g) obtained in Example 18 and 3,3'-difluorobenzhydryl chloride (34 g) obtained in the previous step were treated in the same manner as in Example 4 to give the title compound (76 g, yield 99%).

FAB-Ms: 585(MH+)

<sup>1</sup>H-NMR (300MHz, DMSO-d<sub>6</sub>): 8.24(1H, d, J=1.4Hz), 7.98(1H, d, J=8.7Hz), 7.88(1H, d, J=8.7Hz), 7.56(1H, t, J=8.6Hz), 7.50-7.40 (6H, m), 6.82(1H, s), 4.34(2H, q, J=7.1Hz), 3.95(1H, m), 2.20-2.10(2H, m), 1.90-1.80(4H, m), 1.6(1H, m), 1.35(3H, t, J=7.2Hz), 1.30-1.20(3H, mz)

#### Example 20

Production of 2-(4-(bis[3-fluorophenyl]methoxy)-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid

[0324] Ethyl 2-{4-[bis(3-fluorophenyl)methoxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylate (75 g) ob-

tained in Example 19 was treated in the same manner as in Example 2 to give the title compound (48 g, yield 62%). melting point: 242-243°C FAB-Ms: 557(MH+)

<sup>1</sup>H-NMR (300MHz, DMSO-d<sub>6</sub>): 8.29(1H, s), 8.16(1H, d, J=8.8Hz), 7.99(1H, d, J=8.7Hz), 7.66(1H, t, J=8.7Hz), 7.51-7.40 (6H, m), 7.30(1H, d, J=12.1Hz), 7.20-7.14(3H, m), 6.88(1H, s), 4.07(1H, m), 2.40-2.10(2H, m), 2.00-1.75(4H, m), 1.70-1.55(1H, m), 1.50-1.15(3H, m)

#### Example 21

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Production of ethyl 1-cyclopentyl-2-(4-nitrophenyl)benzimidazole-5-carboxylate

[0325] In the same manner as in Example 1, the title compound (12 q) was obtained.

#### 30 Example 22

Production of ethyl 2-(4-aminophenyl)-1-cyclopentylbenzimidazole-5-carboxylate

[0326] Ethyl 1-cyclopentyl-2-(4-nitrophenyl)benzimidazole-5-carboxylate (12 g) obtained in Example 21 was dissolved in tetrahydrofuran (200 ml) and ethyl alcohol (50 ml), 7.5% palladium carbon (50% wet, 1 g) was added. The mixture was hydrogenated for 1 hr at atmospheric pressure. The catalyst was filtered off and the filtrate was concentrated under reduced pressure. Tetrahydrofuran was added to the residue to allow crystallization and the crystals were collected by filtration to give the title compound (11 g, yield 98%).

<sup>1</sup>H-NMR (300MHz, CDCl<sub>3</sub>): 8.49(1H, d, J=1.3Hz), 7.95(1H, dd, J=8.5, 1.3Hz), 7.50-7.40(3H, m), 6.79(2H, d, J=4.6Hz), 4.97(1H, quint, J=8.9Hz), 4.40(2H, q, J=7.1Hz), 3.74(2H, brs), 2.40-1.60(8H, m), 1.41(3H, t, J=7.1Hz)

#### Example 23

Production of ethyl 2-(4-benzoylaminophenyl)-1-cyclopentylbenzimidazole-5-carboxylate

[0327] Ethyl 1-cyclopentyl-2-(4-aminophenyl)benzimidazole-5-carboxylate (300 mg) obtained in Example 22 was dissolved in pyridine (3 ml) and chloroform (3 ml), and benzoyl chloride (127 mg) was added. The mixture was stirred for 30 min at room temperature. The reaction mixture was concentrated under reduced pressure and water was added to the residue to allow crystallization. The crystals were collected by filtration to give the title compound (403 mg, yield

<sup>1</sup>H-NMR (300MHz, CDCl<sub>3</sub>): 8.58(1H, s), 8.00(1H, d, J=9.0Hz), 7.84(2H, d, J=7.5Hz), 7.60-7.40(6H, m), 7.14(2H, d, J=7.5Hz), 4.84(1H, quint, J=8.7Hz), 4.41(2H, q, J=7.5Hz), 2.20-1.30(8H, m), 1.41(3H, t, J=7.5Hz)

### Example 24

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Production of 2-(4-benzoylaminophenyl)-1-cyclopentylbenzimidazole-5-carboxylic acid

[0328] Ethyl 2-(4-benzoylaminophenyl)-1-cyclopentylbenzimidazole-5-carboxylate (200 mg) obtained in Example 23

was treated in the same manner as in Example 2 to give the title compound (131 mg, yield 70%). melting point: not lower than 300°C

FAB-Ms: 426(MH+)

<sup>1</sup>H-NMR (300MHz, DMSO-d<sub>6</sub>): 10.75(1H, s), 8.35(1H, s), 8.15and7.85(4H, ABq, J=8.9Hz), 8.10-7.98(4H, m), 7.70-7.55 (3H, m), 5.02(1H, quint, J=8.7Hz), 2.36-2.15(4H, m), 2.14-1.95(2H, m), 1.80-1.62(2H, m)

#### Example 25

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Production of ethyl 2-{4-[3-(3-chlorophenyl)phenoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylate

[0329] Ethyl 2-[4-(3-bromophenoxy)phenyl]-1-cyclohexylbenzimidazole-5-carboxylate (65 g) obtained in Example 1 and 3-chlorophenylboronic acid (23 g) were treated in the same manner as in Example 5 to give the title compound (59 g, yield 85%).

<sup>1</sup>H-NMR (300MHz, CDCl<sub>3</sub>): 8.51(1H, d, J=1.8Hz), 7.99(1H, dd, J=8.7, 1.8Hz), 7.71-7.55(4H, m), 7.51-7.43(2H, m), 7.43-7.27(4H, m), 7.19(1H, d, J=8.4Hz), 7.12(1H, m), 4.41(2H, q, J=7.2Hz), 4.39(1H, m), 2.42-2.22(2H, m), 2.03-1.87 (4H, m), 1.79(1H, m), 1.42(3H, t, J=7.2Hz), 1.39-1.29(3H, m)

### Example 26

20 Production of 2-{4-[3-(3-chlorophenyl)phenoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid

[0330] Ethyl 2-{4-[3-(3-chlorophenyl)phenoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylate (59 g) obtained in Example 25 was treated in the same manner as in Example 2 to give the title compound (43 g, yield 76%). melting point: 253-254°C

<sup>25</sup> FAB-Ms: 523(MH+)

 $^{1}$ H-NMR (300MHz, DMSO-d<sub>6</sub>): 12.82(1H, brs), 8.24(1H, d, J=1.3Hz), 7.98(1H, d, J=8.7Hz), 7.89(1H, dd, J=8.7, 1.3Hz), 7.78(1H, s), 7.72(2H, d, J=9.7Hz), 7.70(1H, m), 7.64-7.42(5H, m), 7.25(2H, d, J=8.7Hz), 7.20(1H, m), 4.33(1H, m), 2.39-2.17(2H, m), 2.00-1.76(4H, m), 1.65(1H, m), 1.50-1.22(3H, m)

#### 30 Example 27

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Production of ethyl 2-[4-(3-acetoxyphenyloxy)phenyl]-1-cyclohexylbenzimidazole-5-carboxylate

[0331] In the same manner as in Example 1, the title compound (87 g) was obtained.

#### Example 28

Production of ethyl 1-cyclohexyl-2-[4-(3-hydroxyphenyloxy)phenyl]benzimidazole-5-carboxylate

[0332] Ethyl 2-[4-(3-acetoxyphenyloxy)phenyl]-1-cyclohexylbenzimidazole-5-carboxylate (87 g) obtained in Example 27 was dissolved in methyl alcohol (250 ml) and tetrahydrofuran (250 ml), and potassium carbonate (31 g) was added. The mixture was stirred for 30 min at room temperature. The insoluble materials were filtered off and the filtrate was concentrated under reduced pressure. Water was added to the residue and the mixture was neutralized with 2N hydrochloric acid. The precipitated crystals were collected by filtration to give the title compound (78 g, yield 97%).
1H-NMR (300MHz, DMSO-d<sub>6</sub>): 9.71(1H, s), 7.98 (1H, d, J=8.7Hz), 7.87(1H, d, J=8.7Hz), 7.68(2H, d, J=8.6Hz), 7.24 (1H, t, J=8.1Hz), 7.18(2H, d, J=8.6Hz), 6.63(1H, d, J=8.1Hz), 6.57(1H, d, J=8.1Hz), 6.51(1H, s), 4.38-4.23(1H, m), 4.35(2H, q, J=6.9Hz), 2.36-2.18(2H, m), 1.99-1.78(4H, m), 1.71-1.59(1H, m), 1.45-1.20(3H, m), 1.36(3H, t, J=6.9Hz)

#### Example 29

Production of ethyl 1-cyclohexyl-2-{4-[3-(4-pyridylmethoxy)phenyloxy]phenyl}benzimidazole-5-carboxylate

[0333] Ethyl 1-cyclohexyl-2-[4-(3-hydroxyphenyloxy)phenyl]-benzimidazole-5-carboxylate (78 g) obtained in Example 28 was suspended in dimethylformamide (800 ml), and sodium hydride (60% oil, 14 g) was added under ice-cooling. The mixture was stirred for 1 hr at room temperature. After the reaction mixture was ice-cooled, 4-chloromethylpyridine hydrochloride (29 g) was added and the mixture was stirred for 30 min. The mixture was then stirred overnight at room temperature. Water was added to the reaction mixture and the precipitated crystals were collected by filtration. The resulting crystals were recrystallized from ethyl alcohol to give the title compound (77 g, yield 82%).

<sup>1</sup>H-NMR (300MHz, CDCl<sub>3</sub>): 8.63(2H, d, J=6.0Hz), 8.51(1H, s), 7.99(1H, d, J=8.7Hz), 7.66(2H, d, J=8.7Hz), 7.62(2H, d, J=8.7Hz), 7.36(2H, d, J=8.7Hz), 7.31(1H, t, J=8.2Hz), 7.26(1H, s), 7.16(2H, d, J=8.7Hz), 6.79-6.70(3H, m), 5.09(2H, s), 4.47-4.31(1H, m),

4.42(2H, q, J=7.0Hz), 2.42-2.22(2H, m), 2.04-1.71(5H, m), 1.45-1.25(3H, m), 1.42(3H, t, J=7.0Hz)

Example 30

Production of 1-cyclohexyl-2-{4-[3-(4-pyridylmethoxy)phenyloxy)phenyl}benzimidazole-5-carboxylic acid

10 [0334] Ethyl 1-cyclohexyl-2-{4-[3-(4-pyridylmethoxy)phenyloxy]-phenyl}benzimidazole-5-carboxylate (60 g) obtained in Example 29 was treated in the same manner as in Example 2 to give the title compound (54 g, yield 75%). melting point: 235-237°C

FAB-Ms: 520(MH+)

<sup>1</sup>H-NMR (300MHz, DMSO-d<sub>6</sub>): 8.58(2H, d, J=6.0Hz), 8.23(1H, s), 7.96 and 7.86(2H, ABq, J=8.7Hz), 7.68 and 7.17 (4H, A'B'q, J=8.7Hz), 7.44(2H, d, J=8.7Hz), 7.39(1H, t, J=8.3Hz), 6.90(1H, d, J=8.1Hz), 6.84(1H, s), 6.75(1H, d, J=8.1Hz), 5.22(2H, s), 4.40-4.22(1H, m), 2.40-2.19(2H, m), 2.00-1.80(4H, m)

### Example 241

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20 Production of methyl 2-{4-[2-(4-chlorophenyl)-5-methoxybenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylate

Step 1: Production of 2-bromo-5-methoxybenzaldehyde

[0335] 3-Methoxybenzaldehyde (15 g) was dissolved in acetic acid (75 ml), and a solution of bromine (5.7 ml) dissolved in acetic acid (15 ml) was added dropwise. The mixture was stirred overnight at room temperature and water (150 ml) was added to the reaction mixture. The precipitated crystals were collected by filtration, washed with water and dried under reduced pressure to give the title compound (21 g, yield 88%).

 $^{1}$ H-NMR (300MHz, CDCl<sub>3</sub>): 10.31(1H, s), 7.52(1H, d, J=8.8Hz), 7.41(1H, d, J=3.3Hz), 7.03(1H, dd, J=8.8, 3.3Hz), 3.48 (3H, s)

Step 2: Production of 2-(4-chlorophenyl)-5-methoxybenzaldehyde

[0336] 2-Bromo-5-methoxybenzaldehyde (10 g) obtained in the previous step was treated in the same method as in Example 5 to give the title compound (11 g, yield 96%).

<sup>35</sup> <sup>1</sup>H-NMR (300MHz, CDCl<sub>3</sub>): 9.92(1H, s), 7.50(1H, d, J=2.6Hz), 7.48-7.14(6H, m), 3.90(3H, s)

Step 3: Production of 2-(4-chlorophenyl)-5-methoxybenzyl alcohol

[0337] 2-(4-Chlorophenyl)-5-methoxybenzaldehyde (10 g) obtained in the previous step was dissolved in tetrahydrofuran (30 ml). The solution was added dropwise to a suspension of sodium borohydride (620 mg) in isopropyl alcohol (50 ml) and the mixture was stirred for 1 hr. The solvent was evaporated under reduced pressure and water was added to the residue. The precipitated crystals were collected by filtration and dried under reduced pressure. The resulting crystals were recrystallized from a mixture of methanol and water to give the title compound (9.2 g, yield 91%).

1H-NMR (300MHz, CDCl<sub>2</sub>): 7.37(2H, d, J=8.6Hz), 7.27(2H, d, J=8.6Hz), 7.17(1H, d, J=8.6Hz), 7.11(1H, d, J=2.6Hz).

6.89(1H, dd, J=8.6, 2.6Hz), 4.57(2H, s), 3.86(3H, s)

Step 4: Production of 2-(4-chlorophenyl)-5-methoxybenzyl chloride

[0338] 2-(4-Chlorophenyl)-5-methoxybenzyl alcohol (20 g) obtained in the previous step was dissolved in ethyl acetate (100 ml) and pyridine (0.5 ml), and thionyl chloride (11 ml) was added dropwise. The mixture was stirred for 1 hr. Water was added to the reaction mixture and the mixture was extracted with ethyl acetate. The organic layer was washed with water, saturated aqueous sodium hydrogencarbonate, water and saturated brine, dried over anhydrous magnesium sulfate, and concentrated under reduced pressure. Isopropyl alcohol was added to the residue to allow crystallization. The resulting crystals were collected by filtration and dried under reduced pressure to give the title compound (16 g, yield 74%).

<sup>1</sup>H-NMR (300MHz, CDCl<sub>3</sub>): 7.43-7.29(4H, m), 7.17(1H, d, J=8.6Hz), 7.05(1H, d, J=2.6Hz), 6.96-6.89(1H, m), 4.46(2H, s), 3.86(3H, s)

**Step 5**: Production of methyl 2-{4-[2-(4-chlorophenyl)-5-methoxybenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylate

[0339] 2-(4-Chlorophenyl)-5-methoxybenzyl chloride (4.0 g) obtained in the previous step and methyl 1-cyclohexyl-2-(4-hydroxyphenyl)-benzimidazole-5-carboxylate (5.0 g) obtained in the same manner as in Example 3 were treated in the same manner as in Example 4 to give the title compound (6.0 g, yield 72%).

1H-NMR (300MHz, CDCl<sub>3</sub>): 8.48(1H, s), 8.00-7.93(1H, m), 7.68-7.62(1H, m), 7.54(2H, d, J=9.0Hz), 7.41-7.16(6H, m), 7.04-6.93(3H, m), 4.97(2H, s), 4.36(1H, m), 3.94(3H, s), 3.87(3H, s), 2.39-2.21(2H, m), 2.02-1.88(4H, m), 1.85-1.45 (4H, m)

### Example 242

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**[0340]** Methyl 2-{4-[2-(4-chlorophenyl)-5-methoxybenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylate (5.0 g) obtained in Example 241 was treated in the same manner as in Example 2 to give the title compound (5.1 g, yield 98%).

APCI-Ms: 568(MH+)

 $^{20}$   $^{1}\text{H-NMR}$  (300MHz, DMSO-d<sub>6</sub>): 8.30(1H, d, J=1.4Hz), 8.24(1H, d, J=8.7Hz), 8.03(1H, d, J=8.7Hz), 7.72(2H, d, J=8.7Hz), 7.51-7.39(4H, m), 7.34-7.18(4H, m), 7.11-7.03(1H, m), 5.08(2H, s), 4.35(1H, m), 3.83(3H, m), 2.40-2.18(2H, m), 2.10-1.96(2H, m), 1.93-1.78(2Hm), 1.72-1.18(4H, m)

#### Example 243

Production of ethyl 2-{4-[3-(4-chlorophenyl)pyridin-2-ylmethoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylate

Step 1: Production of methyl 3-hydroxypicolinate

30 [0341] 3-Hydroxypicolinic acid (1.0 g) was suspended in methanol (10 ml) and concentrated sulfuric acid (1.0 ml) was added. The mixture was refluxed under heating for 5 hr. The reaction mixture was ice-cooled, neutralized with saturated aqueous sodium hydrogencarbonate, and extracted with chloroform. The organic layer was washed with water and saturated brine, and dried over anhydrous magnesium sulfate. The solvent was evaporated under reduced pressure to give the title compound (711 mg, yield 64%). ¹H-NMR (300MHz, CDCl<sub>3</sub>): 10.63(1H, s), 8.28(1H, dd, J=3.7, 1.8Hz), 7.47-7.35(2H, m), 4.06(3H, s)

Step 2: Production of methyl 3-(trifluoromethylsulfonyloxy)-pyridine-2-carboxylate

[0342] Methyl 3-hydroxypicolinate (710 mg) obtained in the previous step and triethylamine (0.77 ml) were dissolved in dichloromethane (7 ml), and trifluoromethanesulfonic anhydride (0.86 ml) was added under ice-cooling. The reaction mixture was allowed to warm to room temperature and the mixture was stirred for 2 hr. Water was added to the reaction mixture and the mixture was extracted with ethyl acetate. The organic layer was washed with saturated brine and dried over anhydrous magnesium sulfate. The solvent was evaporated under reduced pressure to give the title compound (1.2 g, yield 90%). ¹H-NMR (300MHz, CDCl<sub>3</sub>): 8.80-8.73(1H, m), 7.75-7.70(1H, m), 7.63(1H, dd, J=8.2, 4.5Hz), 4.05 (3H, s)

Step 3: Production of methyl 3-(4-chlorophenyl)pyridine-2-carboxylate

[0343] Methyl 3-(trifluoromethylsulfonyloxy)pyridine-2-carboxylate (1.2 g) obtained in the previous step was treated in the same manner as in Example 5 to give the title compound (728 mg, yield 69%).

1H-NMR (300MHz, CDCl<sub>3</sub>): 8.73-8.66(1H, m), 7.77-7.68(1H, m), 7.49(1H, dd, J=7.8, 4.5Hz), 7.46-7.37(2H, m), 7.32-7.23(2H, m), 3.80(3H, s)

Step 4: Production of [3-(4-chlorophenyl)pyridin-2-yl]methanol

[0344] Methyl 3-(4-chlorophenyl)pyridine-2-carboxylate (720 mg) obtained in the previous step was dissolved in tetrahydrofuran (10 ml) and the solution was ice-cooled. Lithium aluminum hydride (160 mg) was added to the solution and the mixture was stirred for 1 hr. To the reaction mixture were added successively water (1.6 ml), 15% sodium

hydroxide (1.6 ml) and water (4.8 ml). The insoluble materials were filtered off and the filtrate was concentrated under reduced pressure. The residue was purified by silica gel flash chromatography (developing solvent, n-hexane:ethyl acetate = 1:1) to give the title compound (208 mg, yield 32%).

<sup>1</sup>H-NMR (300MHz, CDCl<sub>3</sub>): 8.60(1H, dd, J=4.8, 1.5Hz), 7.60-7.55(1H, m), 7.40-7.48(2H, m), 7.29-7.36(1H, m), 7.27-7.20(3H, m), 4.63(2H, s)

Step 5: Production of ethyl 2-{4-[3-(4-chlorophenyl)pyridin-2-ylmethoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylate

- [0345] [3-(4-Chlorophenyl)pyridin-2-yl]methanol (200 mg) obtained in the previous step was dissolved in chloroform (3 ml), and thionyl chloride (0.13 ml) and pyridine (catalytic amount) were added. The mixture was stirred for 1 hr at room temperature and concentrated under reduced pressure. The residue was dissolved in dimethylformamide (3 ml), and ethyl 1-cyclohexyl-2-(4-hydroxyphenyl)benzimidazole-5-carboxylate (232 mg) obtained in the same manner as in Example 3 and potassium carbonate (250 mg) were added. The mixture was stirred for 3 hr with heating at 80°C. The reaction mixture was then allowed to cool. Water was added and the mixture was extracted with ethyl acetate. The organic layer was washed with water and saturated brine, dried over anhydrous magnesium sulfate and concentrated under reduced pressure. The residue was purified by silica gel flash chromatography (developing solvent, n-hexane: ethyl acetate = 1:2) to give the title compound (246 mg, yield 68%).
- <sup>1</sup>H-NMR (300MHz, CDCl<sub>3</sub>): 8.71(1H, dd, J=4.7, 1.4Hz), 8.49(1H, d, J=2.1Hz), 7.96(1H, d, J=10.2Hz), 7.71-7.62(2H, m), 7.53(2H, d, J=8.7Hz), 7.45-7.34(5H, m), 7.04(2H, d, J=8.7Hz), 5.14(2H, s), 4.48-4.29(3H, m), 2.38-2.19(2H, m), 2.02-1.22(11H, m)

#### Example 244

25 Production of methyl-2-[4-(2-bromo-5-tert-butoxycarbonylbenzyloxy)phenyl]-1-cyclohexylbenzimidazole-5-carboxylate

Step 1: Production of tert-butyl 4-bromo-3-methylbenzoate

- [0346] 4-Bromo-3-methylbenzoic acid (25 g) was suspended in dichloromethane (200 ml), and oxalyl chloride (12 ml) and dimethylformamide (catalytic amount) were added. The mixture was stirred for 2 hr at room temperature and the solvent was evaporated under reduced pressure. The residue was dissolved in tetrahydrofuran (200 ml) and the solution was ice-cooled. To the solution was added dropwise a solution of potassium tert-butoxide dissolved in tetrahydrofuran (150 ml) and the mixture was stirred for 30 min. Water was added to the reaction mixture and the mixture was extracted with ethyl acetate. The organic layer was washed with water and saturated brine, and dried over anhydrous magnesium sulfate. The solvent was evaporated under reduced pressure to give the title compound (27 g, yield 85%).
   1H-NMR (300MHz, CDCl<sub>3</sub>): 7.83(1H, d, J=2.2Hz), 7.67-7.53(2H, m), 2.43(3H, s), 1.58 (9H, s)
- Step 2: Production of methyl 2-[4-(2-bromo-5-tert-butoxycarbonylbenzyloxy)phenyl]-1-cyclohexylbenzimidazole-40 5-carboxylate
  - [0347] tert-Butyl 4-bromo-3-methylbenzoate (7.0 g) obtained in the previous step and methyl 1-cyclohexyl-2-(4-hydroxyphenyl)-benzimidazole-5-carboxylate (6.3 g) obtained in the same manner as in Example 3 were treated in the same manner as in Example 4 to give the title compound (8.8 g, yield 77%).
- <sup>45</sup> <sup>1</sup>H-NMR (300MHz, CDCl<sub>3</sub>): 8.49(1H, d, J=1.5Hz), 8.21(1H, d, J=2.1Hz), 7.97(1H, d, J=10.2Hz), 7.82(1H, d, J=10.2Hz), 7.71-7.58(4H, m), 7.16(2H, d, J=8.7Hz), 5.23(2H, s), 4.38(1H, m), 3.95(3H, s), 2.40-2.23(2H, m), 2.04-1.90(4H, m), 1.84-1.73(1H, m), 1.59(9H, s), 1.44-1.27(3H, m)

### Example 245

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Production of methyl 2-{4-[5-tert-butoxycarbonyl-2-(4-chlorophenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylate

[0348] Methyl 2-[4-(2-bromo-5-tert-butoxycarbonylbenzyloxy)phenyl]-1-cyclohexylbenzimidazole-5-carboxylate (4.5 g) obtained in Example 244 was treated in the same manner as in Example 5 to give the title compound (3.6 g, yield 76%).

<sup>1</sup>H-NMR (300MHz, CDCl<sub>3</sub>): 8.48(1H, s), 8.27(1H, d, J=1.8Hz), 8.04(1H, dd, J=7.9, 1.5Hz), 7.96(1H, dd, J=7.0, 1.5Hz), 7.65(1H, d, J=8.6Hz), 7.55(2H, d, J=8.6Hz), 7.43-7.32(5H, m), 7.01(2H, d, J=8.6Hz), 4.99(2H, s), 4.43-4.29(1H, m),

3.95(3H, s), 2.41-2.21(2H, m), 2.02-1.89(4H, m), 1.82-1.73(1H, m), 1.62(9H, s.), 1.46-1.28(3H, m)

#### Example 246

Production of methyl 2-{4-[5-carboxy-2-(4-chlorophenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxỳlate hydrochloride

[0349] Methyl 2-{4-[5-tert-butoxycarbonyl-2-(4-chlorophenyl)-benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylate (3.5 g) obtained in Example 245 was dissolved in dichloromethane (35 ml), and trifluoroacetic acid (35 ml) was added. The mixture was stirred for 1 hr at room temperature and the reaction mixture was concentrated under reduced pressure. The residue was dissolved in ethyl acetate, and 4N hydrochloric acid-ethyl acetate was added. The precipitated crystals were collected by filtration and dried under reduced pressure to give the title compound (3.3 g, yield 97%).

<sup>1</sup>H-NMR (300MHz, DMSO- $d_6$ ): 8.33(1H, d, J=1.5Hz), 8.29(1H, s), 8.24(1H, d, J=1.8Hz), 8.09-8.00(2H, m), 7.74(2H, d, J=8.6Hz), 7.61-7.44(5H, m), 7.24(2H, d, J=8.6Hz), 5.19(2H, s), 4.36(1H, m), 3.93(3H, s), 2.37-1.21(10H, m)

#### Example 247

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Production of methyl 2-{4-[2-(4-chlorophenyl)-5-methylcarbamoylbenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylate

[0350] Methyl 2-{4-[5-carboxy-2-(4-chlorophenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylate hydrochloride (400 mg) obtained in Example 246 was suspended in dichloromethane (5 ml), and oxalyl chloride (0.08 ml) and dimethylformamide (catalytic amount) were added. The mixture was stirred for 2 hr at room temperature. The reaction mixture was concentrated under reduced pressure and the residue was dissolved in dichloromethane (5 ml). The resulting solution was added dropwise to a mixed solution of 40% aqueous methylamine solution (5 ml) and tetrahydrofuran (5 ml) under ice-cooling. The reaction mixture was stirred for 1 hr and concentrated under reduced pressure. Water was added to the residue and the mixture was extracted with ethyl acetate. The organic layer was washed with water, saturated aqueous sodium hydrogencarbonate and saturated brine, and dried over anhydrous magnesium sulfate. The solvent was evaporated under reduced pressure and the residue was crystallized from ethyl acetate and diisopropyl ether. The crystals were collected by filtration and dried under reduced pressure to give the title compound (335 mg, yield 86%).

<sup>1</sup>H-NMR (300MHz, CDCl<sub>3</sub>): 8.47(1H, s), 8.06(1H, d, J=1.8Hz), 7.96(1H, dd, J=8.6, 1.5Hz), 7.82(1H, dd, J=8.2, 2.2Hz), 7.64(1H, d, J=8.6Hz), 7.54(2H, d, J=9.0Hz), 7.44-7.31(5H, m), 6.99(2H, d, J=9.0Hz), 6.35-6.26(1H, m), 5.00(2H, s), 4.35(1H, m), 3.95(3H, s), 3.05(3H, d, J=4.8Hz), 2.40-1.24(10H, m)

### Example 248

Production of 2-{4-[2-(4-chlorophenyl)-5-methylcarbamoylbenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylate hydrochloride

[0351] Methyl 2-{4-[2-(4-chlorophenyl)-5-methylcarbamoylbenzyloxy]-phenyl}-1-cyclohexylbenzimidazole-5-carboxylate (150 mg) obtained in Example 247 and tetrahydrofuran (2 ml) were treated in the same manner as in Example 2 to give the title compound (141 mg, yield 90%).

APCI-Ms: 594(MH+)

 $^{1}\text{H-NMR}$  (300MHz, DMSO-d<sub>6</sub>): 8.65-8.58(1H, m), 8.27(1H, d, J=1.5Hz), 8.21(1H, d, J=8.2Hz), 8.15(1H, d, J=1.5Hz), 8.05-7.90(2H, m), 7.70(2H, d, J=8.6Hz), 7.56-7.43(5H, m), 7.21(2H, d, J=8.6Hz), 5.14(2H, s), 4.34(1H, m), 2.81(3H, d, J=4.5Hz), 2.39-1.19(10H, m)

### 50 Example 336

Production of methyl 2-[4-(2-bromo-5-nitrobenzyloxy)-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylate

[0352] Commercially available 2-bromo-5-nitrotoluene was dissolved in carbon tetrachloride (30 ml), and N-bromosuccinimide (2.9 g) and N,N'-azobisisobutyronitrile (228 mg) were added, which was followed by refluxing under heating
overnight. The reaction mixture was allowed to cool, water was added and the mixture was extracted with chloroform.
The organic layer was dried over magnesium sulfate and concentrated under reduced pressure. The residue was
dissolved in dimethylformamide (30 ml) and methyl 2-(2-fluoro-4-hydroxyphenyl)-1-cyclohexylbenzimidazole-5-car-

boxylate (3.8 g) obtained in the same manner as in Example 3 and potassium carbonate (3.8 g) were added, which was followed by stirring at 80°C for 1 hr. The reaction mixture was allowed to cool, water was added and the mixture was extracted with ethyl acetate. The organic layer was washed with water and saturated brine, dried over anhydrous magnesium sulfate and concentrated under reduced pressure. The residue was purified by silica gel flash chromatography (n-hexane:ethyl acetate = 1:1) to give the title compound (3.7 g, yield 61%).

<sup>1</sup>H-NMR (300MHz, CDCl<sub>3</sub>): 8.55-8.45(2H, m), 8.15-8.05(1H, m), 7.99(1H, dd, J=8.6Hz, 1.5Hz), 7.70-7.55(2H, m), 7.05-6.85(2H, m), 5.24(2H, s), 4.06(1H, m), 3.95(3H, s), 2.35-2.15(2H, m), 2.05-1.85(4H, m), 1.80-1.70(1H, m), 1.45-1.20(3H, m)

#### 10 Example 337

Production of methyl 2-[4-{2-(4-chlorophenyl)-5-nitrobenzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylate

[0353] Methyl 2-[4-(2-bromo-5-nitrobenzyloxy)-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylate (2.0 g) obtained in Example 336, 4-chlorophenylboronic acid (590 mg) and tetrakis(triphenylphosphine)palladium (396 mg) were suspended in dimethoxyethane (40 ml), and saturated aqueous sodium hydrogencarbonate solution (20 ml) was added, which was followed by refluxing under heating for 1 hr. The reaction mixture was allowed to cool, water was added and the mixture was extracted with chloroform. The organic layer was dried over anhydrous magnesium sulfate and concentrated under reduced pressure. The residue was purified by silica gel flash chromatography (n-hexane:ethyl acatate = 2:1) to give the title compound (1.9 g, yield 90%). <sup>1</sup>H-NMR (300MHz, CDCl<sub>3</sub>): 8.55(1H, d, J=2.3Hz), 8.49 (1H, d, J=1.4Hz), 8.29(1H, dd, J=8.4Hz, 2.3Hz), 7.98(1H, dd, J=8.6Hz, 1.5Hz), 7.60-7.30(6H, m), 6.85-6.70(2H, m), 5.03(2H, s), 4.02(1H, m), 3.95(3H, s), 2.35-2.10(2H, m), 2.05-1.70(5H, m), 1.40-1.20(3H, m)

#### 25 Example 338

Production of methyl 2-[4-{5-amino-2-(4-chlorophenyl)benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylate

[0354] Methyl 2-[4-{2-(4-chlorophenyl)-5-nitrobenzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylate (1.9 g) obtained in Example 337 was suspended in ethanol (40 ml), and tin(II) chloride dihydrate (3.5 g) was added, which was followed by refluxing under heating for 30 min. The reaction mixture was concentrated under reduced pressure, 4N sodium hydroxide was added and the mixture was extracted with chloroform. The organic layer was washed with 2N sodium hydroxide and water, dried over anhydrous magnesium sulfate and concentrated under reduced pressure. Diisopropyl ether was added to the residue, and the precipitated crystals were collected by filtration to give the title compound (1.5 g, yield 82%).

<sup>1</sup>H-NMR (300MHz, CDCl<sub>3</sub>): 8.49(1H, d, J=1.2Hz), 7.98(1H, dd, J=9.0, 1.5Hz), 7.66(1H, d, J=8.7Hz), 7.49(1H, t, J=8.4Hz), 7.40-7.20(3H, m), 7.13(1H, d, J=8.1Hz), 6.92(1H, d, J=2.7Hz), 6.85-6.65(4H, m), 4.92(2H, s), 4.03(1H, m), 3.95(3H, s), 3.82(2H, brs), 2.30-2.10(2H, m), 2.05-1.80(4H, m), 1.80-1.70(1H, m), 1.40-1.10(3H, m)

### Example 339

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Production of methyl 2-[4-{2-(4-chlorophenyl)-5-(2-oxopyrrolidin-1-yl)benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylate

[0355] Methyl 2-[4-{5-amino-2-(4-chlorophenyl)benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxy-late (500 mg) obtained in Example 338 and triethylamine (0.14 ml) were dissolved in chloroform (5 ml), and commercially available chlorobutyryl chloride (0.1 ml) was added under ice-cooling, which was followed by stirring at room temperature for 3 hr. Water was added to the reaction mixture and the mixture was extracted with ethyl acetate. The organic layer was washed with water and saturated brine, dried over anhydrous magnesium sulfate and concentrated under reduced pressure. The residue was dissolved in dimethylformamide (6 ml) and potassium carbonate (244 mg) was added, which was followed by stirring at 80°C for 1 hr. The reaction mixture was allowed to cool, water was added and the precipitated crystals were collected by filtration to give the title compound (502 mg, yield 89%).

1H-NMR (300MHz, CDCl<sub>3</sub>): 4.89(1H, d, J=1.5Hz), 7.98(1H, dd, J=8.6Hz, 1.6Hz), 7.72(1H, d, J=2.2Hz), 7.75-7.65(2H,

m), 7.49(1H, t, J=8.3Hz), 7.45-7.20(5H, m), 6.85-7.65(2H, m), 4.99(2H, s), 4.10-3.85(6H, m), 2.66(2H, t, J=7.8Hz), 2.30-2.15(4H, m), 2.00-1.85(4H, m), 1.80-1.70(1H, m), 1.45-1.20(3H, m)

#### Example 340

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Production of 2-[4-{2-(4-chlorophenyl)-5-(2-oxopyrrolidin-1-yl)benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride

[0356] Methyl 2-[4-{2-(4-chlorophenyl)-5-{2-oxopyrrolidin-1-yl)benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimida-zole-5-carboxylate (200 mg) obtained in Example 339 was treated in the same manner as in Example 2 to give the title compound (182 mg, yield 87%).

Ms:638(M+1)

<sup>1</sup>H-NMR (300MHz, CDCl<sub>3</sub>): 8.28(1H, d, J=1.3Hz), 8.10(1H, d, J=8.7Hz), 8.05-7.90(2H, m), 7.77(1H, dd, J=8.4Hz, 2.2Hz), 7.61(1H, t, J=8.5Hz), 7.55-7.35(5H, m), 7.00-7.20(2H, m), 5.09(2H, s), 4.06(1H, m), 3.90(2H, t, J=6.9Hz), 2.60-2.45(2H, m), 2.30-2.00(4H, m), 1.95-1.75(4H, m), 1.70-1.55(1H, m), 1.45-1.15(3H, m)

#### Example 340-2

Step 1: Production of 4'-chloro-4-nitro-biphenyl-2-carbaldehyde

[0357] To a solution of 2-chloro-5-nitrobenzaldehyde (100 g) in 1,2-dimethoxyethane (1000 ml) were added 4-chlorophenylboronic acid (93 g), bistriphenylphosphine palladium(II) dichloride (380 mg), sodium hydrogencarbonate (68 g) and water (500 ml), and the mixture was refluxed for 1 hr. The reaction mixture was cooled to 50°C, ethyl acetate (1000 ml) was added thereto and the mixture was stirred. The aqueous layer was separated and the organic layer was washed with water (500 ml), 1N aqueous sodium hydroxide solution (500 ml), water (500 ml), 28% aqueous ammonia (500 ml), water (500 ml), 2N hydrochloric acid (500 ml) and saturated brine (500 ml), dried over anhydrous magnesium sulfate and concentrated under reduced pressure. The residue was suspended in diisopropyl ether (500 ml), filtrated and vacuum dried to give the title compound (120 g, yield 85%).

 $^{1}\text{H-NMR}$  (300MHz, DMSO-d<sub>6</sub>): 9.92(1H, s), 8.61 (1H, d, J=2.5Hz), 8.53(1H, dd, J=2.6Hz, 8.5Hz), 7.82(1H, d, J=8.5Hz), 7.64(2H, d, J=8.7Hz), 7.59(2H, d, J=8.7Hz)

Step 2: Production of (4'-chloro-4-nitro-biphenyl-2-yl)methanol

[0358] A solution of 4'-chloro-4-nitro-biphenyl-2-carbaldehyde (120 g) obtained in the previous step in tetrahydrofuran (900 ml) was added dropwise to a suspension of sodium borohydride (47 g) in 2-propanol (600 ml), over 70 min under water-cooling. The reaction mixture was stirred at room temperature for 1 hr, and 2N hydrochloric acid (185 ml) was dropwise added thereto over 40 min under water-cooling. The mixture was stirred at room temperature for 30 min and concentrated under reduced pressure. The residue was suspended in 2-propanol (300 ml), and water (1000 ml) was added with stirring. After stirring the mixture for 30 min, the crystals were collected by filtration and vacuum dried to give the title compound (116 g, yield 96%).

 $^{1}$ H-NMR (300MHz, DMSO-d<sub>6</sub>): 8.43(1H, d, J=2.5Hz), 8.19(1H, dd, J=2.6Hz, 8.4Hz), 7.57(2H, d, J=8.5Hz), 7.52(1H, d, J=8.4Hz), 7.47(2H, d, J=8.6Hz), 5.59(1H, brs), 4.48(2H, s)

Step 3: Production of (4-amino-4'-chloro-biphenyl-2-yl)methanol

[0359] To a suspension of (4'-chloro-4-nitro-biphenyl-2-yl)methanol (1.0 g) obtained in the previous step and sodium hydrosulfite (2.0 g) in N,N-dimethylformamide (4 ml) and methanol (1 ml) was added water (0.3 ml, 50 µl each time in 6 portions) every 20 min at 100°C. Water (5 ml) was added threto at room temperature. Conc. hydrochloric acid (2.5 ml) was added threto at room temperature. The mixture was stirred at 55°C for 2.5 hr, and a solution of sodium hydroxide (1.2 g) in water (3 ml) was added under ice-cooling. Water (5 ml) was added and the mixture was stirred at room temperature for 1 hr. The precipitate was filtrated and washed with water (3 ml). The crystals were vacuum dried to give the title compound (700 mg, yield 79%).

<sup>1</sup>H-NMR (400MHz, DMSO-d<sub>6</sub>): 7.39(2H, d, J=8.5Hz), 7.35(2H, d, J=8.5Hz), 6.90(1H, d, J=8.4Hz), 6.82(1H, s), 6.56 (1H, d, J=8.4Hz), 5.20(2H, brs), 5.04(1H, t, J=5.4Hz), 4.29(2H, d, J=5.4Hz).

Step 4: Production of 4-chloro-N-(4'-chloro-2-hydroxymethylbiphenyl-4-yl)butyramide

[0360] To a solution of (4-amino-4'-chloro-biphenyl-2-yl)-methanol (1.0 g) obtained in the previous step in tetrahy-drofuran (10 ml) were added sodium acetate (390 mg) and acetic acid (0.27 ml) at room temperature.

[0361] 4-Chlorobutyryl chloride (0.48 ml) was gradually added dropwise under ice-cooling. After stirring the mixture at room temperature for 30 min, water (20 ml) and ethyl acetate (20 ml.) were added to the reaction mixture and the

organic layer was separated. The organic layer was washed with saturated aqueous sodium hydrogencarbonate (20 ml) and saturated brine (20 ml). The organic layer was dried over sodium sulfate, filtrated and the solvent was evaporated to give the title compound (1.44 g, yield 99%).

<sup>1</sup>H-NMR (300MHz, CDCl<sub>3</sub>): 7.68(1H, s), 7.55(1H, d, J=8.4Hz), 7.39(2H, d, J=8.5Hz), 7.28(2H, d, J=8.5Hz), 7.22(1H, d, J=8.3Hz), 4.58(2H, s), 3.69(2H, t, J=6.1Hz), 2.60(2H, t, J=7.0Hz), 2.22(2H, m)

Step 5: Production of 1-(4'-chloro-2-hydroxymethyl-biphenyl-4-yl)-2-pyrrolidinone

[0362] To a solution of 4-chloro-N-(4'-chloro-2-hydroxymethylbiphenyl-4-yl)butyramide (1.44 g) obtained in the previous step in N,N-dimethylformamide (15 ml) was added potassium carbonate (710 mg) at room temperature. After stirring the mixture at 100°C for 90 min, 1N hydrochloric acid (5 ml) and water (20 ml) were added at room temperature and the precipitated crystals were collected by filtration and washed with water (5 ml). The crystals were vacuum dried to give the title compound (970 mg, yield 76%).

<sup>1</sup>H-NMR (300MHz, CDCl<sub>3</sub>): 7.76(1H, d, J=2.3Hz), 7.62(1H, dd, J=2.4Hz, 8.3Hz), 7.38(2H, d, J=8.5Hz), 7.29(2H, d, J=8.5Hz), 7.25(1H, d, J=8.3Hz), 4.61(2H, s), 3.91(2H, t, J=7.0Hz), 2.62(2H, t, J=7.8Hz), 2.18(2H, m)

Step 6: Production of 1-(4'-chloro-2-chloromethyl-biphenyl-4-yl)-2-pyrrolidinone

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[0363] To a mixed solution of 1-(4'-chloro-2-hydroxymethylbiphenyl-4-yl)-2-pyrrolidinone (900 mg) obtained in the previous step in N,N-dimethylformamide (2 ml) and toluene (7 ml) was dropwise added thionyl chloride (0.26 ml) under ice-cooling. After stirring the mixture at room temperature for 3 hr, the reaction mixture was diluted with ethyl acetate (20 ml) and washed with water (20 ml), saturated aqueous sodium hydrogencarbonate (20 ml) and saturated brine (20 ml). The organic layer was dried over sodium sulfate, filtrated and the solvent was evaporated under reduced pressure to give the title compound (954 mg, yield 99%).

<sup>25</sup> <sup>1</sup>H-NMR (300MHz, CDCl<sub>3</sub>): 7.77(1H, d, J=2.3Hz), 7.69(1H, dd, J=2.4Hz, 8.5Hz),7.42(2H, d, J=8.6Hz), 7.34(2H, d, J=8.6Hz), 7.26(1H, d, J=8.4Hz), 4.50(2H, s), 3.92(2H, t, J=7.0Hz), 2.65(2H, t, J=7.8Hz), 2.20(2H, m)

Step 7: Production of methyl 2-[4-{2-(4-chlorophenyl)-5-(2-oxopyrrolidin-1-yl)benzyloxy)-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylate

[0364] To a suspension of methyl 1-cyclohexyl-2-(2-fluoro-4-hydroxyphenyl)benzimidazole-5-carboxylate (915 mg) obtained in Example 18 in N,N-dimethylformamide (6 ml) was added 1-(4'-chloro-2-chloromethyl-biphenyl-4-yl)-2-pyrrolidinone (954 mg) obtained in the previous step and potassium carbonate (415 mg) at room temperature. After stirring the mixture at 100°C for 1 hr, 1N hydrochloric acid (3 ml) and water (8 ml) were added at room temperature and the precipitated crystals were collected by filtration and washed with water (5 ml). The crystals were vacuum dried to give the title compound (1.6 g, yield 100%).

<sup>1</sup>H-NMR (300MHz, CDCl<sub>3</sub>): 8.49(1H, d, J=1.5Hz), 7.98(1H, dd, J=1.6Hz, 8.6Hz), 7.90(1H, d, J=2.2Hz), 7.72-7.65(2H, m), 7.49(1H, t, J=8.3Hz), 7.40(2H, d, J=8.5Hz), 7.34(1H, d, J=8.7Hz), 7.31(2H, d, J=8.6Hz), 6.80 (1H, d, J=8.6Hz), 6.71(1H, d, J=11.6Hz), 4.99(2H, s), 4.04(1H, m), 3.95(3H, s), 3.93(2H, t, J=7.1Hz), 2.66(2H, t, J=7.8Hz), 2.30-2.15 (4H, m), 2.00-1.85(4H, m), 1.80-1.70(1H, m), 1.45-1.20(3H, m)

Step 8: Production of 2-[4-{2-(4-chlorophenyl)-5-(2-oxopyrrolidin-1-yl)benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid

[0365] Methyl 2-[4-{2-(4-chlorophenyl)-5-(2-oxopyrrolidin-1-yl)benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimida-zole-5-carboxylate (2.0 g) obtained in the previous step was suspended in methanol (4.0 ml) and tetrahydrofuran (8.0 ml), and 2N aqueous sodium hydroxide solution (2.3 ml) was added. The mixture was heated under reflux for 3 hr. The reaction mixture was allowed to cool and tetrahydrofuran (1.0 ml) and water (5.0 ml) were added. 2N Hydrochloric acid (2.3 ml) was gradually added at room temperature. After stirring the mixture at room temperature for 2 hr, the precipitated crystals were collected by filtration and washed successively with methanol-water (1:1) mixed solution (6.0 ml), water (6.0 ml) and methanol-water (1:1) mixed solution (6.0 ml), and vacuum dried to give the title compound (1.84 g, yield 94%).

<sup>1</sup>H-NMR (300MHz, DMSO- $d_6$ ): 12.75(1H, brs), 8.26(1H, s), 7.99(1H, s), 7.96(1H, d, J=9.0Hz), 7.89(1H, d, J=9.0Hz), 7.78(1H, dd, J=2.1Hz, 8.4Hz), 7.54(1H, t, J=9.0Hz), 7.49(2H, d, J=8.7Hz), 7.45(2H, d, J=8.4Hz), 7.38(1H, d, J=8.4Hz), 7.08(1H, dd, J=2.1Hz, 12.0Hz), 6.96(1H, dd, J=2.1Hz, 8.7Hz), 5.09(2H, s), 3.99(1H, m), 3.91(2H, t, J=6.6Hz), 2.54 (2H, t, J=7.8Hz), 2.30-2.00(4H, m), 1.95-1.50(5H, m), 1.45-1.20(3H, m)

**Step 9**: Production of 2-[4-{2-(4-chlorophenyl)-5-(2-oxopyrrolidine-1-yl)benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride

[0366] To 4N hydrochloric acid (50 ml) were successively added 2-[4-{2-(4-chlorophenyl)-5-(2-oxopyrrolidin-1-yl)ben-zyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid (10.0 g) obtained in the previous step and acetone-methyl ethyl ketone (3:2) mixed solution (20 ml). The mixture was stirfed at 60°C for 3 hr and at room temperature for 1 hr. The crystals were collected by filtration, washed twice with acetone (10 ml) and vacuum dried to give the title compound (9.62 g, yield 91%).

melting point: 243-246°C

Ms: 638(M+1)

 $^{1}\text{H-NMR}(300\text{MHz}, DMSO-d_{6}): 8.33(1\text{H}, d, J=1.1\text{Hz}), 8.21(1\text{H}, d, J=8.8\text{Hz}), 8.02(1\text{H}, d, J=8.8\text{Hz}), 8.00(1\text{H}, d, J=2.2\text{Hz}), 7.77(1\text{H}, dd, J=2.2\text{Hz}, 8.4\text{Hz}), 7.68(1\text{H}, t, J=8.4\text{Hz}), 7.50(2\text{H}, d, J=8.4\text{Hz}), 7.45(2\text{H}, d, J=8.4\text{Hz}), 7.39(1\text{H}, d, J=8.4\text{Hz}), 7.20(1\text{H}, dd, J=2.2\text{Hz}, 12.1\text{Hz}), 7.06(1\text{H}, dd, J=2.2\text{Hz}, 8.8\text{Hz}), 5.11(2\text{H}, s), 4.13(1\text{H}, m), 3.91(2\text{H}, t, J=7.0\text{Hz}), 2.54(2\text{H}, t, J=8.1\text{Hz}), 2.40-2.05(4\text{H}, m), 2.00-1.75(4\text{H}, m), 1.70-1.55(1\text{H}, m), 1.50-1.20(3\text{H}, m)$ 

[0367] In the same manner as in Examples 1-30, 241-248 and 336-340 and optionally using other conventional methods, where necessary, the compounds of Examples 31-240, 249-335, 341-471, 701-703 and 1001-1559 were obtained. The chemical structures and properties are shown in Table 1 to 177, 185 to 212, 219 to 221 and 225 to 269.

### Example 501

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Production of methyl 2-{4-[2-(4-chlorophenyl)-5-methoxybenzyloxy]phenyl}-1-cyclohexyl-1H-indole-5-carboxylate

Step 1: Production of methyl 3-bromo-4-cyclohexylaminobenzoate

[0368] 3-Bromo-4-fluorobenzoic acid (2.0 g) was dissolved in methanol (20 ml) and concentrated sulfuric acid (2 ml) was added. The mixture was refluxed for 3 hr. The reaction mixture was poured into ice-cold water and extracted with ethyl acetate (50 ml). The organic layer was washed with water (30 ml) and saturated brine (30 ml), and dried over sodium sulfate. After filtration, the solvent was evaporated under reduced pressure. The residue was dissolved in dimethyl sulfoxide (20 ml) and cyclohexylamine (10.3 ml) was added. The mixture was stirred overnight at 120°C. The reaction mixture was poured into 10% aqueous citric acid solution (100 ml) and extracted with ethyl acetate (100 ml). The organic layer was washed with water (50 ml) and saturated brine (50 ml), and dried over sodium sulfate. After filtration, the solvent was evaporated under reduced pressure and the residue was purified by silica gel flash chromatography (developing solvent, n-hexane:ethyl acetate = 10:1) to give the title compound (2.6 g, yield 92%). 1H-NMR (300MHz, CDCl<sub>3</sub>): 8.10(1H, d, J=1.9Hz), 7.83(1H, dd, J=1.9Hz, 8.6Hz), 6.59(1H, d, J=8.7Hz), 4.73(1H, brd, J=7.3Hz), 3.85(3H, s), 3.38(1H, m), 2.10-2.00(2H, m), 1.90-1.20(8H, m)

Step 2: Production of 4'-chloro-2-(4-iodophenoxymethyl)-4-methoxybiphenyl

[0369] 4-lodophenol (5.0 g) was dissolved in acetone (50 ml), and potassium carbonate (4.7 g) and 4'-chloro-2-chloromethyl-4-methoxybiphenyl (6.0 g) were added. The mixture was refluxed for 10 hr. The reaction mixture was concentrated and 4N aqueous sodium hydroxide solution (50 ml) was added. The precipitated crystals were collected by filtration, washed with water, and dried under reduced pressure to give the title compound (10.0 g, yield 98%).

1H-NMR (300MHz, CDCl<sub>3</sub>): 7.52(2H, d, J=8.9Hz), 7.35(2H, d, J=8.5Hz), 7.27-7.20(3H, m), 7.12(1H, s), 6.95(1H, d, J=8.5Hz), 6.62(2H, d, J=8.9Hz), 4.84(2H, s), 3.85(3H, s)

Step 3: Production of [4-(4'-chloro-4-methoxybiphenyl-2-ylmethoxy)phenylethynyl]trimethylsilane

[0370] 4'-Chloro-2-(4-iodophenoxymethyl)-4-methoxybiphenyl (7.0 g) obtained in the previous step was dissolved in acetonitrile (50 ml), and trimethylsilylacetylene (2.3 g), tetrakis-(triphenylphosphine) palladium complex (1.8 g), copper(I) iodide (0.6 g) and triethylamine (50 ml) were added. The mixture was stirred overnight at room temperature and concentrated. Water (30 ml) was added and the mixture was extracted with ethyl acetate (50 ml). The organic layer was washed with water (30 ml) and saturated brine (30 ml) and dried over sodium sulfate. After filtration, the solvent was evaporated under reduced pressure and the residue was purified by silica gel flash chromatography (developing solvent, n-hexane:ethyl acetate = 10:1) to give the title compound (5.1 g, yield 79%).

<sup>5</sup> <sup>1</sup>H-NMR (300MHz, CDCl<sub>3</sub>): 7.37(2H, d, J=8.9Hz), 7.34(2H, d, J=8.2Hz), 7.28-7.21(3H, m), 7.13(1H, s), 6.94(1H, d, J=8.2Hz), 6.75(2H, d, J=8.9Hz), 4.87(2H, s), 3.85(3H, s), 0.23(9H, s)

Step 4: Production of methyl 3-[4-(4'-chloro-4-methoxybiphenyl-2-ylmethoxy)phenylethynyl]-4-cyclohexylaminobenzoate

[0371] [4-(4'-Chloro-4-methoxybiphenyl-2-ylmethoxy)phenylethynyl]-trimethylsilane (5.1 g) obtained in the previous step was dissolved in methanol (50 ml) and chloroform (50 ml), and potassium carbonate (2.5 g) was added. The mixture was stirred for 3 hr at room temperature and concentrated. Water (30 ml) was added and the mixture was extracted with ethyl acetate (50 ml). The organic layer was washed with water (30 ml) and saturated brine (30 ml) and dried over sodium sulfate. After filtration, the solvent was evaporated under reduced pressure to give white crystals (3.8 g). The white crystals (2.3 g) were dissolved in acetonitrile (10 ml), and methyl 3-bromo-4-cyclohexylaminobenzoate (1.0 g) obtained in Step 1, tetrakis(triphenylphosphine)palladium complex (0.4 g), copper(I) iodide (0.1 g) and triethylamine (10 ml) were added. The mixture was stirred overnight at 100°C and concentrated under reduced pressure. Water (30 ml) was added and the mixture was extracted with ethyl acetate (50 ml). The organic layer was washed with water (30 ml) and saturated brine (30 ml), and dried over sodium sulfate. After filtration, the solvent was evaporated under reduced pressure and the residue was purified by silica gel flash chromatography (developing solvent, n-hexane: ethyl acetate = 8:1) to give the title compound (0.9 g, yield 49%).

 $^{1}$ H-NMR (300MHz, CDCl<sub>3</sub>): 8.03(1H, s), 7.84(1H, d, J=8.7Hz), 7.42-7.22(7H, m), 7.15(1H, s), 6.95(1H, d, J=8.2Hz), 6.85(2H, d, J=8.8Hz), 6.59(1H, d, J=8.8Hz), 5.07(1H, brs), 4.91(2H, s), 3.86(3H, s), 3.85(3H, s), 3.42(1H, m), 2.15-2.00 (2H, m), 1.80-1.20(8H, m)

20 Step 5: Production of methyl 2-{4-[2-(4-chlorophenyl)-5-methoxybenzyloxy]phenyl}-1-cyclohexyl-1H-indole-5-carboxylate

[0372] Methyl 3-[4-(4'-chloro-4-methoxybiphenyl-2-ylmethoxy)phenylethynyl]-4-cyclohexylaminobenzoate (0.5 g) obtained in the previous step was dissolved in N,N-dimethylformamide (5 ml), and copper(I) iodide (0.17 g) was added. The mixture was refluxed for 3 hr at 180°C. The insoluble materials were removed by filtration. Water (10 ml) was added and the mixture was extracted with ethyl acetate (30 ml). The organic layer was washed with water (10 ml) and saturated brine (10 ml), and dried over sodium sulfate. After filtration, the solvent was evaporated under reduced

saturated brine (10 ml), and dried over sodium sulfate. After filtration, the solvent was evaporated under reduced pressure and the residue was purified by silica gel flash chromatography (developing solvent, n-hexane:ethyl acetate = 8:1) to give the title compound (0.27 g, yield 55%).

<sup>30</sup> <sup>1</sup>H-NMR (300MHz, CDCl<sub>3</sub>): 8.34(1H, s), 7.85(1H, d, J=8.8Hz), 7.62(1H, d, J=8.8Hz), 7.40-7.18(8H, m), 7.00-6.94(3H, m), 6.48(1H, s), 4.95(2H, m), 4.18(1H, m), 3.93(3H, s), 3.88(3H, s), 2.45-2.25(2H, m), 1.95-1.20(8H, m)

#### Example 502

35 Production of 2-{4-[2-(4-chlorophenyl)-5-methoxybenzyloxy]phenyl}-1-cyclohexyl-1H-indole-5-carboxylic acid

[0373] Methyl 2-{4-[2-(4-chlorophenyl)-5-methoxybenzyloxy]phenyl}-1-cyclohexyl-1H-indole-5-carboxylate (0.27 g) obtained in Example 501 was treated in the same manner as in Example 2 to give the title compound (0.19 g, yield 71%). APCI-Ms: 566(MH+)

<sup>40</sup> <sup>1</sup>H-NMR (300MHz, DMSO-d<sub>6</sub>): 12.43(1H, brs), 8.20(1H, s), 7.79(1H, d, J=9.3Hz), 7.72(1H, d, J=9.0Hz), 7.50-7.20(8H, m), 7.07-7.03(3H, m), 6.53(1H, s), 5.01(2H, s), 4.13(1H, m), 3.83(3H, m), 2.35-2.25(2H, m), 1.85-1.10(8H, m) [0374] In the same manner as in Examples 501 and 502, and optionally using other conventional methods where necessary, the compound of Example 503 was obtained. The chemical structure and properties are shown in Table 207.

### 45 Example 601

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Production of ethyl 2-(4-benzyloxyphenyl)-3-cyclohexylimidazo-[1,2-a]pyridine-7-carboxylate

**Step 1:** Production of 4-benzyloxy-N-methoxy-N-methylbenzamide

[0375] 4-Benzyloxybenzoic acid (5.0 g) and N,O-dimethylhydroxylamine hydrochloride (2.5 g) were suspended in dimethylformamide (50 ml), and 1-(3-dimethylaminopropyl)-3-ethylcarbodiimide hydrochloride (5.0 g), 1-hydroxybenzotriazole (3.5 g) and triethylamine (3.6 ml) were added. The mixture was stirred overnight at room temperature. Water was added to the reaction mixture and the mixture was extracted with ethyl acetate. The organic layer was washed successively with water, saturated aqueous sodium hydrogencarbonate, water and saturated brine, and dried over anhydrous magnesium sulfate. The solvent was evaporated under reduced pressure to give the title compound (5.6 g, yield 94%).

<sup>1</sup>H-NMR (300MHz, CDCl<sub>3</sub>): 7.22, 2H, d, J=8.8Hz), 7.28-7.46(5H, m), 6.97(2H, d, J=8.8Hz), 5.10(2H, s), 3.56(3H, s),

3.35(3H, s)

## Step 2: Production of 1-(4-benzyloxyphenyl)-2-cyclohexylethanone

[0376] Magnesium (470 mg) was suspended in tetrahydrofuran (2 ml) and cyclohexylmethyl bromide (3.4 g) was added dropwise at room temperature. After the addition, the reaction mixture was stirred for 30 min at 60°C. The reaction mixture was allowed to cool and diluted with tetrahydrofuran (5 ml). Separately, 4-benzyloxy-N-methoxy-Nmethylbenzamide (3.4 g) obtained in the previous step was dissolved in tetrahydrofuran (10 ml) and the solution was added dropwise to the reaction mixture at room temperature. The mixture was stirred for 2 hr and saturated aqueous ammonium chloride solution was added to the reaction mixture. The mixture was extracted with diethyl ether. The organic layer was washed with saturated brine and dried over anhydrous magnesium sulfate, and the solvent was evaporated under reduced pressure. The residue was purified by silica gel flash chromatography (developing solvent, n-hexane:ethyl acetate = 9:1) to give the title compound (3.8 g, yield 66%). <sup>1</sup>H-NMR (300MHz, CDCl<sub>3</sub>): 7.93(2H, d, J=8.8Hz), 7.28-7.46(5H, m), 7.00(2H, d, J=8.8Hz), 5.13(2H, s), 2.76(2H, d,

15 J=6.8Hz), 1:95(1H, m), 0.78-1.82(10H, m)

# Step 3: Production of 1-(4-benzyloxyphenyl)-2-bromo-2-cyclohexylethanone

[0377] 1-(4-Benzyloxyphenyl)-2-cyclohexylethanone (1.0 g) obtained in the previous step was dissolved in 1,4-dioxane (10 ml) and bromine (0.17 ml) was added. The mixture was stirred for 10 min at room temperature. Saturated aqueous sodium hydrogencarbonate was added to the reaction mixture and the mixture was extracted with diethyl ether. The organic layer was washed with water and saturated brine and dried over anhydrous magnesium sulfate, and the solvent was evaporated under reduced pressure. The residue was purified by silica gel flash chromatography (developing solvent, n-hexane:ethyl acetate = 9:1) to give the title compound (696 mg, yield 55%).

<sup>1</sup>H-NMR (300MHz, CDCl<sub>3</sub>): 7.98(2H, d, J=8.9Hz), 7.28-7.48(5H, m), 7.02(2H, d, J=8.9Hz), 5.14(2H, s), 4.89(1H, d, J=9.3Hz), 0.86-3.30(11H, m)

# Step 4: Production of ethyl 2-(4-benzyloxyphenyl)-3-cyclohexylimidazo[1,2-a]pyridine-7-carboxylate

[0378] Ethyl 2-aminopyridine-4-carboxylate (214 mg) prepared according to JP-A-8-48651, 1-(4-benzyloxyphenyl)-30 2-bromo-2-cyclohexylethanone (500 mg) obtained in the previous step and potassium carbonate (356 mg) were stirred for 5 hr with heating at 140°C. The reaction mixture was allowed to cool and chloroform was added. The insoluble materials were filtered off and the filtrate was concentrated under reduced pressure. The residue was purified by silica gel flash chromatography (developing solvent, n-hexane:ethyl acetate = 1:1) to give the title compound (95 mg, yield 35 16%).

APCI-MS: 455(MH+)

<sup>1</sup>H-NMR (300MHz, CDCl<sub>3</sub>): 8.33 (1H, s), 8.21(1H, d, J=7.5Hz), 7.55(2H, d, J=8.7Hz), 7.25-7.50(6H, m), 5.13(2H, s), 4.41 (2H, q, J=7.1Hz), 3.25(1H, m), 1.41(3H, t, J=7.1Hz), 1.15-2.00(10H, m)

#### 40 Example 602

Production of 2-(4-benzyloxyphenyl)-3-cyclohexylimidazo[1,2-a]pyridine-7-carboxylic acid

[0379] Ethyl 2-(4-benzyloxyphenyl)-3-cyclohexylimidazo[1,2-a]pyridine-7-carboxylate (95 mg) obtained in the previous step was treated in the same manner as in Example 2 to give the title compound (33 mg, 37%). APCI-MS: 427(MH+)

 $^{1}$ H-NMR (300MHz, DMSO-d<sub>6</sub>): 8.67(1H, d, J=7.3Hz), 8.08(1H, s), 7.25-7.58(8H, m), 7.13(2H, d, J=8.7Hz), 5.17(2H, d, J=8.7Hz), 5.17(2H, d, J=8.7Hz), 5.17(2H, d, J=8.7Hz), 7.25-7.58(8H, m), 7.13(2H, d, J=8.7Hz), 7.13( s), 3.23(1H, m), 1.25-2.10(10H, m)

[0380] The compounds shown in Tables 213 to 218 can be further obtained in the same manner as in Examples 1 to 703 or by other conventional method employed as necessary.

[0381] The evaluation of the HCV polymerase inhibitory activity of the compound of the present invention is explained in the following. This polymerase is an enzyme coded for by the non-structural protein region called NS5B on the RNA gene of HCV (EMBO J., 15:12-22, 1996).

#### Experimental Example [I]

- i) Preparation of enzyme (HCV polymerase)
- Using, as a template, a cDNA clone corresponding to the full length RNA gene of HCV BK strain obtained from the blood of a patient with hepatitis C, a region encoding NS5B (591 amino acids; J Virol 1991 Mar, 65(3), 1105-13) was amplified by PCR. The objective gene was prepared by adding a 6 His tag {base pair encoding 6 continuous histidine (His)} to the 5' end thereof and transformed to Escherichia coli. The Escherichia coli capable of producing the objective protein was cultured. The obtained cells were suspended in a buffer solution containing a surfactant and crushed in a microfluidizer. The supernatant was obtained by centrifugation and applied to various column chromatographys {poly[U]-Sepharose, Sephacryl S-200, mono-S (Pharmacia)}, inclusive of metal chelate chromatography, to give a standard enzyme product.
  - ii) Synthesis of substrate RNA

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[0383] Using a synthetic primer designed based on the sequence of HCV genomic 3' untranslated region, a DNA fragment (148 bp) containing polyU and 3'X sequence was entirely synthesized and cloned into plasmid pBluescript SK II(+) (Stratagene). The cDNA encoding full length NS5B, which was prepared in i) above, was digested with restriction enzyme KpnI to give a cDNA fragment containing the nucleotide sequence of from the restriction enzyme cleavage site to the termination codon. This cDNA fragment was inserted into the upstream of 3' untranslated region of the DNA in pBluescript SK II(+) and ligated. The about 450 bp inserted DNA sequence was used as a template in the preparation of substrate RNA. This plasmid was cleaved immediately after the 3'X sequence, linearized and purified by phenol-chloroform treatment and ethanol precipitation to give DNA.

[0384] RNA was synthesized (37°C, 3 hr) by run-off method using this purified DNA as a template, a promoter of pBluescript SK II(+), MEGAscript RNA synthesis kit (Ambion) and T7 RNA polymerase. DNasel was added and the mixture was incubated for 1 hr. The template DNA was removed by decomposition to give a crude RNA product. This product was treated with phenol-chloroform and purified by ethanol precipitation to give the objective substrate RNA.

[0385] This RNA was applied to formaldehyde denaturation agarose gel electrophoresis to confirm the quality thereof and preserved at -80°C.

iii) Assay of enzyme (HCV polymerase) inhibitory activity

[0386] A test substance (compound of the present invention) and a reaction mixture (30  $\mu$ l) having the following composition were reacted at 25°C for 90 min.

[0387] 10% Trichloroacetic acid at 4°C and 1% sodium pyrophosphate solution (150 µl) were added to this reaction mixture to stop the reaction. The reaction mixture was left standing in ice for 15 min to insolubilize RNA. This RNA was trapped on a glass filter (Whatman GF/C and the like) upon filtration by suction. This filter was washed with a solution containing 1% trichloroacetic acid and 0.1% sodium pyrophosphate, washed with 90% ethanol and dried. A liquid scintillation cocktail (Packard) was added and the radioactivity of RNA synthesized by the enzyme reaction was measured on a liquid scintillation counter.

[0388] The HCV polymerase inhibitory activity ( $IC_{50}$ ) of the compound of the present invention was calculated from the values of radioactivity of the enzyme reaction with and without the test substance.

[0389] The results are shown in Tables 178-184 and 222-224.

[0390] Reaction mixture: HCV polymerase (5  $\mu$ g/ml) obtained in i), substrate RNA (10  $\mu$ g/ml) obtained in ii), ATP (50  $\mu$ M), GTP (50  $\mu$ M), CTP (50  $\mu$ M), UTP (2  $\mu$ M), [5,6-3H]UTP (46 Ci/mmol (Amersham), 1.5  $\mu$ Ci) 20 mM Tris-HCl (pH 7.5), EDTA (1 mM), MgCl<sub>2</sub> (5 mM), NaCl (50 mM), DTT (1 mM), BSA (0.01%)

[0391] Formulation Example is given in the following. This example is merely for the purpose of exemplification and does not limit the invention.

Formulation Example		
(a) compound of Example 1	10 g	
(b) lactose	50 g	
(c) corn starch	15 g	
(d) sodium carboxymethylcellulose	44 g	
(e) magnesium stearate	1 g	

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[0392] The entire amounts of (a), (b) and (c) and 30 g of (d) are kneaded with water, dried in vacuo and granulated. The obtained granules are mixed with 14 g of (d) and 1 g of (e) and processed into tablets with a tableting machine to give 1000 tablets each containing 10 mg of (a).

Table 1

Example	No.	31	IH NMR(δ) ppm
	<b>├</b>		300MHz, CDC13 7. 81 (2H, d, J=6. 6Hz), 7. 60 ( 2H, d, J=8. 8Hz), 7. 51-7. 21 ( 8H, m), 7. 11 (2H, d, J=8. 8Hz), 5. 15 (2H, s), 4. 93 (1H, quin t, J=8. 8Hz), 2. 36-2. 32 (2H, m), 2. 09-2. 04 (3H, m), 1. 75-1. 68 (3H, m).
Purity	>90% (NM)	R) .	
MS	369 (M+1)		

Example No.	32 1H NMR(δ) ppm
	300MHz, CDC13 8. 51 (1H, d, J=1.5Hz), 7. 98 (1H, d, J=8.4Hz), 7. 61 (2H, d, J=8.7Hz), 7. 56-7. 10 (6H, m), 7. 12 (2H, d, J=8.7Hz), 5. 15 (2H, s), 4. 94 (1H, quint, J=9.3Hz), 4. 41 (2H, q, J=7.5Hz), 2. 40-1.50 (8H, m), 1. 41 (3H, t, J=7.5Hz)
Purity >90% (NM	R)
MS 441 (M+1)	

Example No.	33	1H NMR(δ) ppm
NICHO O		300MHz, CDC13 7.84(1H, s), 7.61(2H, d, J=9.0Hz), 7.58-7.30(7H, m), 7. 12(2H, d, J=9.0Hz), 5.15(2H, s), 4.94(1H, quint, J=8.7Hz), 3.10(6H, brs), 2.40-1.50(8H, m)
Purity > 90% (NMR)		
MS 440 (M+1)		

Table 2

Example No.	34	1H NMR(δ) ppm
	<b>→</b>	300MHz, CDC13 8. 20(1H, s), 7. 50-7. 31(9H, m), 7. 12(2H, d, J=8. 7Hz), 5. 15(2H, s), 4. 94(1H, quint, J=8. 7Hz), 3. 61(3H, s), 3. 40(3H, s), 2. 41-1. 42(8H, m)
Purity > 90% (NMR)	)	
MS 456 (M+1)		·

Example	No.	35	1H NMR(δ) ppm
но	N		300MHz, CDC13 7. 91 (1H. s), 7. 59 (2H, d, J=8 . 7Hz), 7. 49-7. 30 (7H, m), 7. 11 (2H, d, J=8. 8Hz), 5. 15 (2H , s), 4. 19 (1H, quint, J=8. 8H z), 2. 41-2. 22 (2H, m), 2. 13- 1. 49 (14H, m)
Purity	>90% (NMR)		
MS	427 (M+1)		

Example No.	36	1H NMR(δ) ppm
	~	300MHz, CDC13 8. 40 (1H, d, J=1. 4Hz), 7. 95 ( 1H, dd, J=8. 6, 1. 4Hz), 7. 61 ( 2H, d, J=8. 7Hz), 7. 57-7. 30 ( 6H, m), 7. 13 (2H, d, J=8. 7Hz), 5. 16 (2H, s), 4. 95 (1H, quint, J=8. 8Hz), 2. 64 (3H, s), 2. 40-1. 54 (8H, m)
Purity >90% (NMR	)	
MS 411(M+1)		

Table 3

Example	No.	37	1H NMR(δ) ppm
2HCI			300MHz, DMSO-d6 10. 47 (1H, brs,), 9. 15 (1H, b rs), 8. 40 (1H, s), 8. 07 (1H, d, J=9. 0Hz), 7. 93 (1H, d, J=8. 7Hz), 7. 77 (2H, d, J=8. 7Hz), 7. 55-7. 29 (7H, m), 5. 26 (2H, s), 4. 93 (1H, quint, J=9. 0Hz), 3. 77-3. 63 (2H, m), 3. 39-3. 23 (2H, m), 2. 84 (6H, d, J=4. 8Hz), 2. 32-1. 60 (8H, m)
Purity	>90% (NMR)		
MS	483 (M+1)		

Example 1	No:	38	1H NMR(δ) ppm
02N			300MHz, CDC13 8. 69 (1H, s), 8. 19 (1H, d, J=9 . 0Hz), 7. 62 (2H, d, J=8. 7Hz) , 7. 54 (1H, d, J=9. 0Hz), 7. 48 -7. 36 (5H, m), 7. 15 (2H, d, J= 8. 7Hz), 5. 17 (2H, s), 4. 98 (1 H, quint, J=9. 0Hz), 2. 27-2. 07 (6H, m), 1. 82-1. 78 (2H, m)
Purity	>90% (NMR)		
MS.	414 (M+1)		

Example	No.	39	1H NMR(δ) ppm
H₂N HCI			300MHz, DMSO-d6 7.84(1H, d, J=9.0Hz), 7.79( 2H, d, J=8.7Hz), 7.52-7.33( 8H, m), 7.26(1H, d, J=9.0Hz), 5.27(2H, s), 4.92(1H, quint, J=9.3Hz), 2.19-1.70(8H, m).
Purity	>90% (NMR)		
MS	384 (M+1)		·

Table 4

Example No.	40	1H NMR(δ) ppm
	- -	300MHz, CDC13 7.72(1H, s), 7.60-7.35(10H, m), 7.10(2H, d, J=8.7Hz), 5 .14(2H, s), 4.90(1H, quint, J=8.8Hz), 2.29-2.19(2H, m), 2.19(3H, s), 2.19-1.74(6H, m).
Purity >90%	(NMR)	
MS 426 (	M+1)	

Example No.

H
300MHz, CDC13
7. 66(1H, s), 7. 61(2H, d, J=8.8Hz), 7. 50-7. 28(7H, m), 7. 12(2H, d, J=8.8Hz), 6. 86(1H, brs), 5. 15(2H, s), 4. 94(1H, quint, J=8.8Hz), 2. 97(3H, s), 2. 29-1. 76(8H, m).

Purity > 90% (NMR)

MS
462(M+1)

Example No.	42	1H NMR(δ) ppm
ONH2 ON NH2 N	<b>-</b> €	300MHz, DMSO -d6 8. 11 (1H, s), 7. 81 (1H, d, J=8 .4Hz), 7. 72 (1H, d, J=8. 4Hz) , 7. 65 (2H, d, J=8. 4Hz), 7. 51 (2H, m), 7. 43 (2H, m), 7. 37 (1 H, m), 7. 29 (2H, s), 7. 23 (2H, d, J=8. 4Hz), 5. 22 (2H, s), 4. 89 (1H, quintet, J=9. 2Hz), 2 .2-2. 0 (6H, m), 1. 7 (2H, m).
Purity > 90% (NMR)		
MS 448 (M+)		1

Table 5

Example No.	43	1H NMR(δ) ppm
HO NO CONTRACTOR OF THE PARTY O	<del>\</del>	300MHz, DMSO-d6 8. 33 (1H, s), 8. 08 (1H, d, J=9 . 0Hz), 7. 99 (1H, d, J=9. 0Hz) , 7. 47-7. 41 (4H, m), 7. 33 (2H , d, J=8. 4Hz), 5. 22 (2H, s), 4 . 96 (1H, quint, J=9. 0Hz), 2. 25-1. 60 (8H, m), 1. 30 (9H, s)
Purity > 90% (NMR)		
MS 469 (M+1)		

Example No. 4	4 1H. NMR(δ) ppm
HO NO O	OHOMBOO HE STAND HE S
Purity >90% (NMR)	
MS 457 (M+1)	

Example No.	45	1H NMR(δ) ppm
но		300MHz, DMSO-d6 13. 4(1H, brs), 8. 32(1H, s), 8. 06(1H, d, J=8. 7Hz), 7. 97( 1H, d, J=8. 7Hz), 7. 79(2H, d, J=8. 8Hz), 7. 56-7. 48(4H, m), 7. 33(2H, d, J=8. 8Hz), 5. 27(2H, s), 4. 95(1H, quint, J=8. 9Hz), 2. 30-1. 60(8H, m).
Purity >90% (NMR	)	
MS 447 (M+1)		

Table 6

Example	No.	46	1H NMR(δ) ppm
но		S CI	300MHz, DMSO-d6 8. 33(1H, s), 8. 07(1H, d, J=8 . 7Hz), 7. 98(1H, d, J=8. 7Hz) , 7. 80(2H, d, J=8. 4Hz), 7. 34 (2H, d, 8. 4Hz), 7. 19(1H, d, J =3. 6Hz), 7. 09(1H, d, J=3. 6H z), 5. 41(2H, s), 4. 95(1H, qu int, J=8. 7Hz), 2. 30-1. 60(8 H, m).
Purity	>90% (NN	1R)	
MS	453 (M+1)		

Example No. 47

HO

N

CF<sub>3</sub>

Purity > 90% (NMR)

MS

481 (M+1)

1H NMR(δ) ppm

300MHz, DMSO-d6

8. 33 (1H, s), 8. 07 (1H, d, J=8

4Hz), 7. 98 (1H, d, J=9. 0Hz)

7. 82-7. 72 (6H, m), 7. 35 (2H, d, J=9. 0Hz), 5. 40 (2H, s), 4

95 (1H, quint, J=8. 7Hz), 2.

35-1. 60 (8H, m).

Example No. 48	1H NMR(δ) ppm
HO NO	300MHz, DMSO-d6 8. 23(1H, s), 7. 88(1H, d, J=8 . 4Hz), 7. 70(1H, d, J=8. 4Hz) , 7. 64(2H, d, J=8. 4Hz), 7. 43 (2H, d, J=8. 4Hz), 7. 20(2H, d , J=8. 4Hz), 6. 98(2H, d, J=8. 4Hz), 5. 13(2H, s), 4. 88(1H, quint, J=8. 7Hz), 3. 77(3H, s ), 2. 35-1. 60(8H, m).
Purity >90% (NMR)	
MS 443 (M+1)	

Table 7

Example	No.	49	1H.NMR(δ) ppm
но		HCI	300MHz, DMSO-d6 8. 93(2H, d, J=6.6Hz), 8. 35(1H, s), 8. 06-8. 04(3H, m), 7. 97(1H, d, J=8.7Hz), 7. 83(2H, d, J=8.7Hz), 5. 61(2H, s), 4. 94(1H, quint, J=8.7Hz), 2. 40-1. 60(8H, m).
Purity	>90% (NMR)		
MS	414 (M+1)		

Example No.	50	1H NMR(δ) ppm
HO NO O		300MHz, DMSO-d6 8. 33 (1H, s), 8. 08 (1H, d, J=8 .7Hz), 7. 99 (1H, d, J=9. 0Hz) ,7. 78 (2H, d, J=8. 4Hz), 7. 39 (2H, d, J=8. 1Hz), 7. 32 (2H, d , J=8. 7Hz), 7. 23 (2H, d, J=7. 8Hz), 5. 22 (2H, s), 4. 96 (1H, quint, J=9. 0Hz), 2. 32 (3H, s ), 2. 30-1. 60 (8H, m).
Purity >90% (NMR	2)	
MS 427 (M+1)		

Example	No.	51	1H NMR(δ) ppm
но		)-o_}	300MHz, DMSO-d6 8. 31 (1H, s), 8. 03 (1H, d, J=9 .0Hz), 7. 93 (1H, d, J=9. 0Hz) , 7. 77 (2H, d, J=8. 4Hz), 7. 31 (2H, d, J=8. 7Hz), 5. 07 (2H, s ), 4. 94 (1H, quint, J=8. 7Hz) , 2. 45 (3H, s), 2. 26 (3H, s), 2 .26-1. 60 (8H, m).
Purity	>90% (	NMR)	
MS	432 (M	+1)	

Table 8

Example No.	52	1H NMR(δ) ppm
но	-OH	300MHz, DMSO-d6 12.7(1H, brs), 10.0(1H, s), 8.22(1H, s), 7.87(1H, d, J=8 .6Hz), 7.69(1H, d, J=8.6Hz), 7.53(2H, d, J=8.6Hz), 6.96 (2H, d, J=8.6Hz), 4.89(1H, q uint, J=9.0Hz), 2.30-1.60( 8H, m).
Purity >90% (NMR)		
MS 323 (M+1)		

Example No.	53	1H NMR(δ) ppm
HONDE	- <b>(</b> )	300MHz, DMSO-d6 9. 18 (1H, t, J=5. 6Hz), 8. 34 ( 1H, s), 8. 04 (1H, d, J=9. 6Hz), 7. 98 (1H, d, J=8. 7Hz), 7. 80 (2H, d, J=8. 7Hz), 7. 52-7. 32 (7H, m), 5. 27 (2H, s), 4. 95 (1 H, quint, J=9. 0Hz), 3. 99 (2H, d, J=5. 7Hz), 2. 40-1. 60 (8H, m).
Purity >90% (NMR)		
MS 470 (M+1)		

Example No.	54	1H NMR(δ) ppm
но Си		300MHz, DMSO-d6 8. 32(1H, s), 8. 05(1H, d, J=8 .7Hz), 7. 95(1H, d, J=8. 7Hz) ,7. 80(2H, d, J=8. 4Hz), 7. 67 (1H, t, J=4. 5Hz), 7. 56(1H, t ,J=4. 5Hz), 7. 45-7. 42(2H, m ), 7. 35(2H, d, J=8. 4Hz), 5. 3 1(2H, s), 4. 96(1H, quint, J= 9. 0Hz), 2. 30-1. 60(8H, m).
Purity >90% (NMR)		·
MS 447 (M+1)		

Table 9

Example	No.	55	1H NMR(δ) ppm
но		CI	300MHz, DMSO-d6 12.78(1H, br s), 8.24(1H, s), 7.88and7.7 2(2H, ABq, J=8.6Hz), 7.66an d7.23(4H, A'B'q, J=8.6Hz), 7.58(1H, s), 7.48-7.42(3H, m), 5.24(1H, s), 4.88(1H, qu int, J=8.8Hz), 2.30-1.91(6 H, m), 1.78-1.60(2H, m)
Purity	>90% (NMR)		
MS	447 (M+1)		

Example No. 56	1H NMR(δ) ppm
HO N O	300MHz, DMSO-d6 12.89(1H, broad), 8.18(1H, s), 7.87(1H, d, J=8.4Hz), 7.74(1H, d, J=9.2Hz), 7.67(2H, d, J=8.8Hz), 7.52(2H, m), 7.45(2H, m), 7.38(1H, m), 7.23(2H, d, J=8.8Hz), 5.22(2H, s), 4.94(1H, quintet, J=8.9Hz), 2.16(4H, m), 1.98(2H, m), 1.73(2H, m)
Purity >90% (NMR)	
MS 413 (M+)	·

Example No.	57	1H NMR(δ) ppm
HO N N	s	300MHz, DMSO-d6 10.99(1H, s), 8.26(1H, s), 8 .01-7.86(4H, m), 7.69-7.59 (5H, m), 7.38(2H, d, J=8.7Hz) ), 4.86(1H, quint, J=8.7Hz) ,2.12-1.90(6H, m), 1.72-1. 59(2H, m)
Purity >90% (NM	R)	;
MS 462 (M+1)		·

Table 10

Example	No.	58	1H NMR(δ) ppm
но		CI	300MHz, DMSO-d6 12.78(1H.s), 10.69(1H,s), 8.26-7.72(9H,m), 4.92(1H, quint, J=9.0Hz), 2.34-1.70 (6H,m), 1.75-1.61(2H,m)
Purity	>90% (1	IMR)	
MS	494 (M+	1) .	

. 

Example No. 59	1H NMR(δ) ppm
HO NO	300MHz, DMSO-d6 10.82(1H, s), 8.34(1H, s), 8 .14and7.84(4H, ABq, J=8.4H z), 8.06and7.66(4H, A'B'q, J=8.6Hz), 8.06-7.98(4H, m) ,5.01(1H, quint, J=9.3Hz), 2.35-2.15(4H, m), 2.11-1.9 6(2H, m), 1.80-1.62(2H, m)
Purity >90% (NMR)	
MS 460 (M+1)	

Example No.	60	1H NMR(δ) ppm
но	<b>&gt;</b> +-	300MHz, DMSO-d6 10.61(1H, s), 8.32(1H, s), 8 .12and7.81(4H, ABq, J=8.9H z), 8.03and7.93(2H, A'B'q, J=8.7Hz), 7.95and7.59(4H, A"B"q, J=8.4Hz), 4.99(1H, q uint, J=9.0Hz), 2.33-2.12( 4H, m), 2.10-1.93(2H, m), 1. 80-1.63(2H, m), 1.34(9H, m)
Purity >90% (NMR)		
MS 482 (M+1)		·

Table 11

Example No.	61	1H NMR(δ) ppm
HO TO		300MHz, DMSO-d6 10.6(1H, s), 8.34(1H, s), 8. 13(2H, d, J=8.7Hz), 8.09-7. 98(4H, m), 7.82(2H, d, J=8.7 Hz), 7.50-7.35(5H, m), 7.20 -7.17(2H, d, J=9.0Hz), 5.24 (2H, s), 5.01(1H, quint, J=9.3Hz), 2.40-1.60(8H, m).
Purity >90% (NMR)		
MS · 532 (M+1)		

Example No. 62	1H NMR(δ) ppm
HO NOH	300MHz, DMSO-d6 8. 32(1H, s), 8. 26(1H, d, J=8 .7Hz), 8. 04(1H, d, J=8. 7Hz), 7. 77(2H, d, J=8. 4Hz), 7. 52 (2H, d, J=6. 9Hz), 7. 46-7. 39 (5H, m), 5. 28(2H, s), 4. 38(1 H, m), 3. 71(1H, m), 2. 60-2. 1 5(2H, m), 2. 04-1. 96(4H, m), 1. 30-1. 20(2H, m).
Purity >90% (NMR)	
MS 443(M+1)	

Example No.	63	1H NMR(δ) ppm
HO NO	)-e	300MHz, DMSO-d6 8. 27 (1H, s), 8. 14 (1H, d, J=8 .7Hz), 7. 96 (1H, d, J=8. 4Hz) .7. 71 (2H, d, J=9. 0Hz), 7. 51 (2H, d, J=6. 9Hz), 7. 46-7. 37 (3H, m), 7. 30 (2H, d, J=8. 4Hz) ), 5. 25 (3H, s), 4. 39 (1H, m), 3. 44 (1H, m), 3. 27 (3H, s), 2. 60-1. 95 (6H, m), 1. 25-1. 05 (2H, m).
Purity about 9	0%(NMR)	
MS 457 (	M+1)	•

Table 12

Example No.	64	lH NMR(δ) ppm
HOTT	-0(	300MHz, DMSO-d6 12.25(1H, brs), 7.70-7.30( 9H, m), 7.20(2H, d, J=8.7Hz), 7.14(1H, d, J=8.4Hz), 5.20 (2H, s), 4.84(1H, quint, J=6.0Hz), 3.66(2H, s), 2.30-1. 51(8H, m)
Purity >90% (NA	AR)	
MS 427 (M+1)		

Example No.	65	1H NMR(δ) ppm
HO TN NO		300MHz, DMSO-d6 12.64(1H, brs), 8.13(1H, s), 7.80(1H, d, J=7.2Hz), 7.59 (1H, d, J=8.7Hz), 7.48-7.30 (5H, m), 5.11(2H, s), 5.03(1 H, quint, J=8.7Hz), 4.20-4. 05(2H, m), 3.45-3.90(3H, m), 2.15-1.60(12H, m)
Purity >90% (NMR)		
MS 448 (M+1)		•

Example No.	66	1H NMR(δ) ppm
HO TO		300MHz, DMSO-d6 10.59(1H, s), 8.31(1H, s), 8 .10(2H, d, J=8.6Hz), 8.03(1 H, d, J=8.7Hz), 8.00-7.85(3 H, m), 7.80(2H, d, J=8.6Hz), 7.41(2H, d, J=8.2Hz), 4.98( 1H, quint, J=8.8Hz), 2.71-1 .10(19H, m)
Purity >90% (NMR)		
MS 508 (M+1)		

Table 13

Example No. 67

HO

N

CI

Purity > 90% (NMR)

MS

481 (M+1)

1H NMR(δ) ppm

300MHz, DMS0-d6
12. 81 (1H, brs), 8. 42 (1H, s)
, 7. 90 (1H, d, J=8. 5Hz), 7. 80
-7. 52 (6H, m), 7. 44 (2H, d, J=8. 6Hz), 5. 25 (2H, s), 4. 88 (1H, quimt, J=8. 8Hz), 2. 30-1.

Example No.	68	1H NMR(δ) ppm
HO NO	CI	300MHz, DMSO-d6 8. 31 (1H, d, J=1. 4Hz), 8. 05 ( 1H, d, J=8. 6Hz), 7. 96 (1H, d, J=8. 6Hz), 8. 86-8. 61 (4H, m) 7. 51 (1H, d, J=6. 3Hz), 7. 33 (2H, d, J=8. 8Hz), 5. 28 (2H, s) ), 4. 94 (1H, quint, J=8. 8Hz) , 2. 31-1. 60 (8H, m)
Purity >90% (N)	MR)	
MS 481 (M+1)		

Example No.	69	1H NMR(δ) ppm
HO NO	ZT	300MHz, DMSO-d6 9. 88 (1H, s), 9. 42 (1H, s), 8. 32 (1H, s), 8. 09and8. 02 (2H, ABq, J=9. 0Hz), 7. 81and7. 78 (4H, A'B' q, J=9. 2Hz), 7. 50 ( 2H, d, J=7. 8Hz), 7. 31 (2H, t, J=7. 8Hz), 7. 00 (1H, t, J=7. 8 Hz), 5. 03 (1H, quint, J=8. 7H z), 2. 34-2. 17 (4H, m), 2. 13- 1. 96 (2H, m), 1. 83-1. 64 (2H,
Purity >90% (NMI	₹)	m)
MS 441 (M+1)		

Table 14

Example No. 70	1H NMR(δ) ppm
HO N	300MHz, DMSO-d6 8. 27 (1H, d, J=1. 2Hz), 8. 04 ( 1H, d, J=8. 7Hz), 7. 94 (1H, d, J=8. 7Hz), 7. 72 (2H, d, J=8. 7 Hz), 7. 60-7. 20 (12H, m)6. 74 (1H, s), 4. 92 (1H, quint, J=8 . 9Hz), 2. 30-1. 58 (8H, m)
Purity >90% (NMR)	
MS . 489 (M+1)	

Example No.	71	1H NMR(δ) ppm
HO NO		300MHz, DMSO-d6 8. 31 (1H, s), 8. 05 (1H, d, J=8 .7Hz), 7. 97 (1H, d, J=8. 7Hz) .7. 76 (2H, d, J=8. 6Hz), 7. 44 -7. 19 (7H. m), 4. 94 (1H, quin t, J=8. 8Hz), 4. 35 (2H, t, J=6 .7Hz), 3. 10 (2H, t, J=6. 7Hz) .2. 32-1. 60 (8H, m)
Purity >90% (NM)	₹)	
MS 427 (M+1)	,	

Example No. 72	1H NMR(δ) ppm
HO NO	300MHz, DMSO-d6 8. 30(1H, s), 8. 25(1H, d, J=8 . 7Hz), 8. 03(1H, d, J=9. 0Hz) , 7. 75(2H, d, J=8. 7Hz), 7. 51 (2H, d, J=7. 2Hz), 7. 46-7. 33 (5H, m), 5. 27(2H, s), 4. 36(1 H, m), 2. 50-2. 25(2H, m), 2. 1 5-2. 00(2H, m), 1. 95-1. 85(2 H, m), 1. 35(1H, m), 1. 20-1. 1 0(2H, m), 0. 87(9H, s).
Purity >90% (NMR)	·
MS 483 (M+1)	

Table 15

Example N	0.	73	1H NMR(δ) ppm
но	I,		300MHz, DMSO-d6 7. 59 (2H, d, J=8. 4Hz), 7. 52- 7. 35 (6H, m), 7. 20 (2H, d, J=8 .7Hz), 7. 14 (1H, d, J=2. 1Hz) ,6. 90 (1H, dd, J=9. 0, 2. 4Hz) ,5. 21 (2H, s), 4. 83 (1H, quin t, J=8. 7Hz), 4. 70 (2H, s), 2. 30-1. 90 (6H, m), 1. 75-1. 55 ( 2H, m).
·Purity >	90% (NMR)		
MS	443 (M+1)		

Example No.	74 1H NMR(δ) ppm
но	300MHz, DMSO-d6 8. 27 (1H, s), 8. 06and7. 97 (2 H, ABq, J=8. 7Hz), 7. 57and6. 86 (4H, A'B'q, J=8. 9Hz), 7. 4 2-7. 26 (5H, m), 5. 04 (1H, qui nt, J=9. 0Hz), 4. 42 (2H, s), 2 .32-1. 94 (6H, m), 1. 80-1. 62 (2H, m)
Purity > 90% (NMR)	
MS 412 (M+1)	

Example No.	<b>7</b> 5 <sup>-</sup>	1H NMR(δ) ppm
HO N	S-V OÖ	300MHz, DMSO-d6 12.80(1H, s), 8.26(1H, s), 7.90(1H, d, J=9.2Hz), 7.76-7.60(8H, m), 7.35(2H, d, J=8.4Hz), 4.84(1H, quint, J=8.8Hz), 3.23(3H, s), 2.32-1.90(6H, m), 1.78-1.61(2H, m)
Purity >90% (	NMR)	
MS 476 (M	+1)	· · · · · · · · · · · · · · · · · · ·

Table 16

Example No.	76	lH NMR(δ) ppm
HO N N		300MHz, DMSO-d6 8. 29(1H, s), 8. 07and7. 49(2 H, ABq, J=8. 7Hz), 7. 66and7. 00(4H, A'B'q, J=7. 7Hz), 7. 3 9-7. 24(5H, m), 5. 05(1H, qui nt, J=8. 8Hz), 4. 76(2H, s), 3 . 21(3H, s), 2. 35-1. 92(6H, m ), 1. 81-1. 62(2H, m)
Purity >90% (NMR)	)	
MS 426 (M+1)		

Example No. 78	1H NMR(δ) ppm
HO N	300MHz, DMSO-d6 8. 14(1H, s), 7. 79(1H, d, J=9 . 0Hz), 7. 57(1H, d, J=8. 7Hz) , 7. 40-7. 20(5H, m), 4. 89(1H , quint, J=8. 7Hz), 3. 54(2H, s), 3. 19-2. 90(3H, m), 2. 23- 1. 69(14H, m)
Purity >90% (NMR)	
MS 404 (M+1)	

Table 17

Example No.	79	1H NMR(δ) ppm
HO N	N-CO	300MHz, DMSO-d6 8. 15(1H, s), 7. 81(1H, d, J=8 .4Hz), 7. 59(1H, d, J=9. 0Hz) , 7. 50-7. 38(5H, m), 5. 05(1H , quint, J=9. 0Hz), 3. 85-2. 9 5(3H, m), 2. 20-1. 65(14H, m)
Purity >90% (N	IMR)	:
MS 418 (M+	1)	•

Example No.	80	1H NMR(δ) ppm
HO	O, N-S=0	300MHz, DMSO-d6 8. 17 (1H, m), 7. 84 (1H, d, J=8 .4Hz), 7. 78-7. 62 (3H, m), 7. 49 (2H, d, J=8. 1Hz), 5. 05-4. 91 (1H, m), 3. 80-3. 70 (2H, m) ,3. 30-3. 12 (1H, m), 2. 48-2. 31 (5H, m), 2. 15-1. 60 (12H, m)
Purity >90%	(NMR)	
MS 468	(M+1)	

Example No.	81	1H NMR(δ) ppm
HO N Q	CI	300MHz, DMSO-d6 12. 75(1H, brs), 8. 21(1H, d, J=1. 4Hz), 7. 49(1H, d, J=8. 6 Hz), 7. 85(1H, dd, J=8. 6, 1. 4 Hz), 7. 70-7. 55(5H, m), 7. 23(2H, d, J=8. 7Hz), 5. 25(2H, s), 4. 36-4. 15(1H, m), 2. 39-2. 18(2H, m), 2. 00-1. 78(4H, m), 1. 70-1. 57(1H, m), 1. 48-1. 15(3H, m)
Purity >90% (NM)	R)	
MS 495 (M+1)		:

Table 18

Example No. 82	1H NMR(δ) ppm
HO N O	300MHz, DMSO-d6 8. 27(1H, s), 8. 22(1H, d, J=8 . 7Hz), 8. 02(1H, d, J=8. 7Hz) , 7. 69(2H, d, J=8. 7Hz), 7. 60 -7. 50(4H, m), 7. 45-7. 25(8H, m), 6. 75(1H, s), 4. 21-4. 23 (1H, m), 2. 39-2. 18(2H, m), 2 . 10-1. 78(4H, m), 1. 70-1. 15 (4H, m)
Purity >90% (NMR)	
MS 503 (M+1)	

Example No. 83

IH NMR(δ) ppm

300MHz, DMSO-d6
13.2(1H, brs), 8.30(1H, s),
8.23(1H, d, J=8.8Hz), 8.02(
1H, d, J=8.7Hz), 7.74(2H, d,
J=8.6Hz), 7.40-7.33(5H, m),
5.22(2H, s), 4.36(1H, m), 2.
50-1.40(10H, m), 1.31(18H, s).

MS 539(M+1)

Example No.	34 1H NMR(δ) ppm
HO N O	mixture of isomers (cis:trans=3:1) 300MHz, DMSO-d6 8.30(1H, s), 8.20-7.95(2H, m), 7.72(2H, d, J=8.4Hz), 7. 52-7.29(7H, m), 5.25(2H, s) ,4.34, 3.40(1H, m), 2.50-2. 20(2H, m), 2.05-1.50(6H, m) ,1.14, 0.90(3H, d, J=6.9, 6. 3Hz), 1.09(1H, m).
Purity >90% (NMR)	
MS .441 (M+1)	

Table 19

Example No.	85	IH NMR(δ) ppm
HO N O	<i></i>	300MHz, DMSO-d6 8. 25 (1H, s), 8. 14-7. 83 (6H, m), 7. 77-7. 44 (5H, m), 7. 21 (2H, d, J=7. 8Hz), 4. 44 (2H, br t), 4. 31 (1H, brt), 3. 56 (2H, brt), 2. 20-2. 16 (2H, m), 2. 00-1. 74 (4H, m), 1. 70-1. 55 (1H, m), 1. 45-1. 14 (3H, m)
Purity >90% (NMR)		
MS 491 (M+1)		

Example No.	86	1H NMR(δ) ppm
HO N Q		300MHz, DMSO-d6 12.75(1H, s), 8.23(1H, s), 8 .15(1H, d, J=7.6Hz), 8.02-7 .53(10H, m), 7.32(2H, d, J=8 .7Hz), 5.68(2H, s), 4.32(1H ,brt, J=12.2Hz), 2.41-2.20 (2H, m), 2.01-1.78(4H, m), 1 .71-1.56(1H, m), 1.50-1.16 (3H, m)
Purity >90% (NMR	2)	
MS 477 (M+1)		

Example No.	87   1H NMR(δ) ppm
HO N N	300MHz, DMSO-d6 12. 75 (1H, brs), 8. 16 (1H, s) , 7. 91and7. 82 (2H, ABq, J=8. 5Hz), 7. 44and6. 86 (4H, A' B' q, J=8. 6Hz), 7. 39-7. 26 (10H, m), 4. 82 (2H, s), 4. 35 (1H, b) rt, J=12. 2Hz), 2. 35-2. 16 (2H, m), 1. 97-1. 75 (4H, m), 1. 6 9-1. 56 (1H, m), 1. 45-1. 16 (3H, m)
Purity >90% (NMR	
MS 516 (M+1)	

Table 20

Example No.	88 1H NMR(δ) ppm	
но	300MHz, DMSO-d6 8.31(1H, s), 8.26and8 H, ABq, J=8.9Hz), 7.73 22(4H, A'B'q, J=8.7Hz 0-7.36(8H, m), 5.10(2 4.37(1H, brt, J=12.2H 38-2.28(2H, m), 2.10- 4H, m), 1.70-1.56(1H, 50-1.20(3H, m)	and7. ), 7. 5 H, s), z), 2. 1. 80 (
Purity >90% (N	MR)	٠.
MS 503 (M+1		

Example No.	89	1H NMR(δ)	ррш :
HO N O	$\langle  \rangle$		
Purity 91% (HPLC)	)		
MS 427 (M+1)			

Example No.	90	1H NMR(δ) ppm ·
HO N O	\( \int \)	300MHz, DMSO-d6 8. 40-8. 20 (2H, m), 8. 04 (1H, d, J=8. 4Hz), 7. 65 (2H, d, J=8. 4Hz), 7. 50-7. 10 (12H, m), 5. 08 (1H, m), 4. 33 (1H, m), 3. 00 (4H, m), 2. 50-1. 10 (10H, m)
Purity >90% (NMR	2)	
MS 531 (M+1)		

Table 21

Example	No.	91	1H NMR(δ) ppm
НО			300MHz, DMSO-d6 8.31(1H, s), 8.27(1H, d, J=8 .7Hz), 8.08-8.03(3H, m), 7. 77-7.58(5H, m), 7.31(2H, d, J=8.7Hz), 5.81(2H, s), 4.40 (1H, m), 2.50-1.20(10H, m).
Purity a	bout 90%(NMR)		
MS	455 (M+1)		

Example No.	92   1H NMR(δ) ppm -	-
PO 2HCI HO N N	300MHz, DMSO-d6 11.8(1H, brs), 8.0 7.89(1H, d, J=8.7H 1H, d, J=8.4Hz), 7. , 7.48(3H, m), 4.42 .11(1H, m), 3.73(4 0(4H, m), 2.40-1.4	z), 7.84( 69(2H, m) (2H, s), 4 H, m).3.4
Purity >90% (NMR)		
MS 419 (M+1)		

Example No.	93	1H NMR(δ) ppm
HO N		300MHz, DMSO-d6 8. 32 (1H, s), 8. 28 (1H, d, J=8 . 9Hz), 8. 05 (1H, d, J=8. 7Hz) , 7. 72 (2H, d, J=8. 7Hz), 7. 38 (4H, d, J=7. 2Hz), 7. 31 (4H, t , J=7. 3Hz), 7. 21-7. 17 (4H, m ), 4. 37 (1H, m), 4. 26 (1H, t, J =7. 9Hz), 4. 01 (2H, t, J=6. 2H z), 2. 57 (2H, m), 2. 50-2. 20 ( 2H, m), 2. 10-2. 00 (2H, m), 2.
Purity >90% (NMR)	)	00-1.75(2H, m), 1.75-1.55( 1H, m), 1.55-1.20(3H, m).
MS 531 (M+1)		

Table 22

Example No.	14 NMR(δ) ppm
HO N O	300MHz, DMSO-d6 8. 32 (1H, s), 8. 27 (1H, d, J=9 .0Hz), 8. 05 (1H, d, J=8. 7Hz) ,7. 75-7. 70 (3H, m), 7. 56 (1H ,d, J=8. 4Hz), 7. 55-7. 35 (6H ,m), 7. 22 (2H, d, J=8. 7Hz), 5 .11 (2H, s), 4. 36 (1H, m), 2. 4 0-2. 15 (2H, m), 2. 15-1. 95 (2 H, m), 1. 95-1. 75 (2H, m), 1. 7 5-1. 55 (1H, m), 1. 55-1. 20 (3
Purity >90% (NMR)	H, m).
MS 537 (M+1)	

Examp]	Le No.	95	lH NMR(δ) ppm
НО			300Hz, DMSO-d6 12.9(1H, brs), 8.02(1H, s), 7.82(2H, m), 7.40-7.25(5H, m), 4.58(2H, s), 4.09(1H, m), 3.71(1H, m), 3.49(2H, m), 3 .21(2H, m), 2.35-1.30(14H, m).
Purity	>90% (NMR)		.`
MS	434 (M+1)		•

Example No.	96	1H NMR(δ) ppm
HO N O	o-{	300MHz, DMSO-d6 8. 31 (1H, d, J=1. 3Hz), 8. 27 ( 1H, d, J=8. 8Hz), 8. 05 (1H, d, J=8. 8Hz), 7. 76 (2H, d, J=8. 7 Hz), 7. 40-7. 25 (4H, m), 7. 06 -6. 90 (3H, m), 4. 53-4. 26 (5H, m), 2. 40-2. 18 (2H, m), 2. 12 -1. 56 (5H, m), 1. 50-1. 19 (3H, m)
Purity >90% (NMR	)	
MS 457 (M+1)		

Table 23

Example	No.	. 97	1H NMR(δ) ppm
но	N N	-0	300MHz, DMSO-d6 8. 32(1H, d, J=1. 3Hz), 8. 29(1H, d, J=8. 8Hz), 8. 05(1H, dd, J=8. 8Hz), 8. 42(2H, d, J=8. 8Hz), 7. 37-7. 16(7H, m), 4. 48-4. 30(1H, m), 4. 12(2H, t, J=6. 2Hz), 2. 83-2. 70(2H, m), 2. 40-1. 50(9H, m), 1. 59-1. 19(3H, m)
Purity	>90%	(NMR)	
MS	455 (	M+1)	

Example No.	98   1H NMR(δ) ppm
HO N O	300MHz, DMSO-d6 8. 28 (1H, d, J=1. 3Hz), 8. 21 ( 1H, d, J=8. 8Hz), 8. 01 (1H, d, J=10. 1Hz), 7. 70 (2H, d, J=8. 7Hz), 7. 33-7. 12 (7H, m), 4. 4 4-4. 28 (1H, m), 4. 10 (2H, t, J =6. 3Hz), 2. 62 (2H, t, J=7. 4H z), 2. 39-2. 15 (2H, m), 2. 10- 1. 18 (14H, m)
Purity >90% (N)	IR)
MS 483 (M+1)	

Example No.	99 1H NMR(δ) ppm
HO NON	300MHz, DMSO-d6 12. 93 (1H, brs), 8. 30 (1H, d, J=1. 4Hz), 8. 04 (1H, d, J=8. 7. Hz), 7. 92 (1H, dd, J=8. 7, 1. 4Hz), 7. 59-7. 34 (5H, m), 7. 07 (1H, s), 5. 38 (2H, s), 4. 78-4. 60 (1H, m), 2. 32-2. 14 (2H, m), 2. 03-1. 28 (8H, m)
Purity >90% (NMR)	
MS 418 (M+1)	

Table 24

Example No.	100	IH NMR(δ) ppm
NaO		300MHz, DMSO-d6 8. 46(1H, d, J=2. 1Hz), 8. 16( 1H, s), 8. 00(1H, dd, J=8. 5, 2 . 1Hz), 7. 87(1H, d, J=8. 5Hz), 7. 68(1H, d, J=8. 5Hz), 7. 55 -7. 30(5H, m), 7. 08(1H, d, J= 8. 5Hz), 5. 45(2H, s), 4. 25-4 .08(1H, m), 2. 39-2. 18(2H, m ), 2. 00-1. 75(4H, m), 1. 70-1 .55(1H. m), 1. 45-1. 19(3H, m
Purity >90% (NMR	) '	,
MS 427 (M+1)		

Example No.	101	1H NMR(δ) ppm
H <sub>3</sub> C-O	 }_O ,cH₃	(2H, t, J=6.9Hz), 2.30(2H, m), 2.04(2H, m), 1.86(2H, m), 1.65(1H, m), 1.50-1.15(3H,
Purity >90% (NM	R) <u>.    </u>	m)
MS 531 (M+1)		

Example No. 102	1H NMR(δ) ppm
HO TN O CH <sub>3</sub>	300MHz, DMSO-d6 12. 88 (1H, s), 8. 34 (1H, s), 7 . 86 (1H, d, J=8. 5Hz), 7. 73 (1 H, d, J=8. 5Hz), 7. 63 and 7. 23 (4H, ABq, J=8. 7Hz), 7. 52-7. 35 (5H, m), 5. 22 (2H, s), 4. 31 (1H, m), 2. 39 (2H, m), 1. 79 (2 H, m), 1. 53 (2H, m), 1. 31 (2H, m), 1. 11 (3H, s), 0. 95 (3H, s)
Purity > 90% (NMR)	
MS 455 (M+1)	

Table 25

No.	103	1H NMR(
		300MHz, 12. 79(1 ,8. 02-7 42(6H, m ,4. 43(2) J=12. 2H 9-2. 15( H, m), 1. ( 3-1. 12(3)
>90% (NMR	.)	,
491 (M+1)		
	>90% (NMR	>90% (NMR)

300MHz, DMSO-d6
12. 79(1H, brs), 8. 22(2H, s), 8. 02-7. 78(4H, m), 7. 63-7.
42(6H, m), 7. 20-7. 09(2H, m), 4. 43(2H, s), 4. 27(1H, brt, J=12. 2Hz), 3. 59(2H, s), 2. 3
9-2. 15(2H, m), 1. 98-1. 72(4H, m), 1. 68-1. 59(1H, m), 1. 4
3-1. 12(3H, m)

δ) ppm

Example	No.	104
но		
Purity.	>90% (NMR)	

519 (M+1)

1H NMR(δ) ppm 300MHz, DMSO-d6 12.75(1H, s), 8.23(1H, s), 7.94and7.86(2H, ABq, J=8.6Hz), 7.64and7.05(4H, A'B'q, J=8.7Hz), 7.32-7.09(9H, m), 5.13(2H, s), 4.28(1H, brt, J=12.2Hz), 2.36-2.19(2H, m), 1.95-1.77(4H, m), 1.66-1.56(1H, m), 1.46-1.10(3H, m))

Example No.	105
HO NO O	
Purity > 90% (NM	IR)

519(M+1)

1H NMR(δ) ppm 300MHz, DMSO-d6 8. 23(1H, s), 7.94and7.87(2 H, ABq, J=8.6Hz), 7.68and7. 17(4H, A'B'q, J=8.7Hz), 7.4 6-7.33(6H, m), 6.93and6.75 (2H, A"B"q, J=8.2Hz), 6.82(1H, s), 5.13(2H, s), 4.30(1H, brt, J=12.2Hz), 2.39-2.18 (2H, m), 1.98-1.77(4H, m), 1.71-1.59(1H, m), 1.48-1.20 (3H, m)

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MS

MS

Table 26

Example No.	106	1H NMR(δ) ppm
HO N O	ОН	300MHz, DMSO-d6 12.89(1H, brs), 9.73(1H, s), 8.24(1H, s), 8.03and7.91(2H, ABq, J=8.7Hz), 7.66and7.04(4H, A'B'q, J=8.7Hz), 7.16-7.03(3H, m), 6.89(2H, t, J=9.2Hz), 4.33(1H, brt, J=12.2Hz), 2.40-2.18(2H, m), 2.00-1.78(4H, m), 1.70-1.58(1H, m), 1.50-1.20(3H, m)
Purity >90% (NMR)		
MS 429 (M+1)		

Example No.	107	1H NMR(δ) ppm
HO N O	_>-он	300MHz, DMSO-d6 12. 98 (1H, brs), 9. 82 (1H, brs), 8. 27 (1H, s), 8. 09and7. 9 4 (2H, ABq, J=8. 7Hz), 7. 74and7. 22 (4H, A'B'q, J=8. 7Hz), 7. 28-7. 22 (1H, m), 6. 67-6. 5 4 (3H, m), 4. 35 (1H, brt, J=12. 2Hz), 2. 40-2. 20 (2H, m), 2. 05-1. 80 (4H, m), 1. 72-1. 59 (1H, m), 1. 50-1. 21 (3H, m)
Purity >90% (NMR	)	
MS 429 (M+1)		

Example No.	108	1H NMR(δ) ppm
но	<u> </u>	300MHz, DMSO-d6 8. 24 (1H, s), 8. 01and7. 90 (2 H, ABq, J=8. 7Hz), 7. 65and7. 03 (4H, A'B'q, J=8. 7Hz), 7. 3 2-7. 20 (3H, m), 7. 08-7. 03 (1 H, m), 4. 32 (1H, brt, J=12. 2H z), 3. 77 (3H, s), 2. 36-2. 20 ( 2H, m), 2. 00-1. 78 (4H, m), 1. 71-1. 59 (1H, m), 1. 44-1. 11 ( 3H, m)
Purity >90	% (NMR)	
MS 4	43(M+1) ·	

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Table 27

Example No		109	IH NMR(δ) ppm
но		<b>)</b> -o′	300MHz, DMSO-d6 12. 75 (1H, s), 8. 24 (1H, s), 7 . 96and7. 87 (2H, ABq, J=9. 0H z), 7. 69and7. 19 (4H, A'B' q, J=8. 6Hz), 7. 37 (1H, t, J=7. 1 Hz), 6. 84-6. 70 (3H, m), 4. 31 (1H, brt, J=12. 2Hz), 3. 78 (3 H, s), 2. 39-2. 20 (2H, m), 1. 9 8-1. 78 (4H, m), 1. 76-1. 60 (1 H, m), 1. 48-1. 13 (3H, m)
Purity >	90% (NMR)		
MS	443 (M+1)		

Example No.	110	1H NMR(δ) ppm
HO N O		300MHz, DMSO-d6 8. 31 (1H, s), 8. 26and8. 04 (2 H, ABq, J=8. 8Hz), 7. 75and7. 71 (4H, A'B'q, J=8. 8Hz), 7. 3 2-7. 03 (4H, m), 4. 34 (1H, brt , J=12. 2Hz), 3. 94 (2H, t, J=6 .3Hz), 2. 40-2. 19 (2H, m), 2. 11-1. 81 (4H, m), 1. 72-1. 16 (6H, m), 0. 71 (3H, t, J=7. 3Hz)
Purity >90% (NM	R)	
MS 471 (M+1)		]

Example No.	111	1H NMR(δ) ppm
но		300MHz, DMSO-d6 8. 22 (1H, s), 7. 91and7. 87 (2 H, ABq, J=8. 7Hz), 7. 68and7. 18 (4H, A'B'q, J=8. 7Hz), 7. 3 5 (1H, t, J=8. 5Hz), 6. 80 (1H, d, J=9. 0Hz), 6. 72-6. 68 (2H, m), 4. 30 (1H, brt, J=12. 2Hz) ,3. 94 (2H, t, J=6. 5Hz), 2. 39 -2. 18 (2H, m), 1. 97-1. 58 (7H, m), 1. 45-1. 20 (3H, m), 0. 97
Purity >9	0% (NMR)	(3H, t, J=7. 4Hz)
MS	471 (M+1)	

Table 28

Example No.	112	1H NMR(δ) ppm
HO N		300MHz, DMSO-d6 12.73(1H, s), 8.22(1H, s), 7 .94and7.85(2H, ABq, J=9.3H z), 7.61and7.01(4H, A'B'q, J=8.6Hz), 7.25-7.00(4H, m) , 5.25(2H, brs), 4.55(2H, d, J=6.6Hz), 4.29(1H, brt, J=1 2.2Hz), 2.38-2.18(2H, m), 1 .96-1.78(4H, m), 1.70-1.56 (1H, m), 1.67(3H, s), 1.60(3
Purity >90%	(NMR)	H, s), 1. 48-1. 15 (3H, m)
MS 497 (	M+1)	

Example No.	113	1H NMR(δ) ppm
HO N O	<u></u>	300MHz, DMSO-d6 12.75(1H, s), 8.23(1H, s), 7 .95and7.86(2H, ABq, J=8.9H z), 7.69and7.18(4H, A'B'q, J=8.9Hz), 7.35(1H, t, J=8.3 Hz), 6.81-6.69(3H, m), 5.41 (2H, brs), 4.54(2H, d, J=6.6 Hz), 4.31(1H, brt, J=12.2Hz ), 2.41-2.18(2H, m), 1.98-1 .76(4H, m), 1.73(3H, s), 1.7
Purity > 90% (NMR)		0-1.58(1H, m), 1.68(3H, s), 1.45-1.17(3H, m)
MS 497 (M+1)		

Example No.	114	1H NMR(δ) ppm
HO N O	<i>,</i>	300MHz, DMSO-d6 12.73(1H, s), 8.22(1H, s), 7 .94and7.85(2H, ABq, J=8.4H z), 7.60and6.99(4H, A'B'q, J=8.6Hz), 7.29-7.00(4H, m) , 4.29(1H, brt, J=12.2Hz), 3 .99(2H, t, J=6.3Hz), 2.41-2 .20(2H, m), 1.95-1.76(4H, m) ), 1.70-1.14(7H, m), 0.76(3 H, d, J=6.6Hz)
Purity >90% (NMR)		·
MS 499(M+1)		·

Table 29

Example No. 115 1H NMR(δ) ppm >90% (NMR) Purity MS 499 (M+1).

300MHz, DMSO-d6 8. 23 (1H, s), 7. 93 and 7. 87 (2 H, ABq, J=8. 6Hz), 7. 69and7. 19 (4H, A' B' q, J=8. 6Hz), 7. 3 5(1H, t, J=7.8Hz), 6.82-6.6 9(3H, m), 4.30(1H, brt, J=12 . 2Hz), 4. 00 (2H, t, J=6. 9Hz), 2. 38-2. 20 (2H, m), 1. 97-1. 54 (8H, m), 1. 47-1. 20 (3H, m), 0. 93 (6H, d, J=6. 6Hz)

	· · · · · · · · · · · · · · · · · · ·		_
Example	No.	116	1H
но			30 8. .9 ,7 (2 (6) ),
Purity	>90% (NMR	)	(1
MS	557 (M+1)		

 $NMR(\delta)$  ppm OOMHz, DMSO-d6 30(1H, s), 8.25(1H, d, J=8)9Hz), 8. 03 (1H, d, J=8. 8Hz) 7. 68 (2H, d, J=8. 8Hz), 7. 24 2H, d, J=7. 2Hz), 7. 19-7. 10 3H, m), 6. 94 (2H, t, J=7. 2Hz 4. 34 (1H, m), 4. 19 (4H, brs 3. 10 (4H, brs), 2. 40-2. 15 2H, m), 2. 10-1.95(2H, m), 1 95-1.75(2H, m), 1.75-1.55 H, m), 1.55-1.20(3H, m).

Example No.	117
но	CF <sub>3</sub>
Purity >909	% (NMR)
MS 57	1 (M+1)

1H NMR(δ) ppm 300MHz, DMSO-d6 12.8(1H, brs), 8.22(1H, s) 7. 98 (1H, d, J=8. 7Hz), 7. 87 ( 1H, d, J=8.6Hz), 7.80(2H, d, J=8.2Hz), 7.72-7.67(3H, m) , 7. 59 (2H, d, J=8. 7Hz), 7. 54 -7. 51 (2H, m), 7. 42-7. 41 (1H, m), 7. 11 (2H, d, J=8. 8Hz), 5 .09(2H, s), 4.27(1H, m), 2.4 0-2. 15 (2H, m), 2. 00-1. 75 (4 H, m), 1.75-1.55(1H, m), 1.5 5-1. 15 (3H, m).

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Table 30

Example No. 118	1H NMR(δ) ppm
HO N CI	300MHz, DMSO-d6 13. 3(1H, brs), 8. 30(1H, s), 8. 25(1H, d, J=8. 9Hz), 8. 04( 1H, d, J=8. 7Hz), 7. 72(2H, d, J=8. 8Hz), 7. 57(4H, d, J=8. 6Hz), 7. 33(2H, d, J=8. 9Hz), 6. 84(1H, s), 4. 33(1H, m), 2. 45-2. 10(2H, m), 2. 10-1. 95(2H, m), 1. 95-1. 70(2H, m), 1. 70-1. 5
Purity >90% (NMR)	5 (1H, m), 1.55-1.15 (3H, m).
MS 571 (M+1)	

Example No.	119	1H NMR(δ) ppm .
HO N O	O H <sub>3</sub> C	300MHz, DMSO-d6 8. 32-8. 30 (2H, m), 8. 07-8. 0 3 (1H, m), 7. 74and6. 90 (4H, A Bq, J=8. 7Hz), 4. 37 (1H, m), 4 .31 (2H, t, J-6. 8Hz), 3. 74 (3 H, s), 3. 04 (2H, t, J=6. 7Hz), 2. 30 (2H, m), 2. 02 (2H, m), 1. 86 (2H, m), 1. 63 (1H, m), 1. 55 -1. 15 (3H, m)
Purity > 90% (NM)	R)	
MS 471 (M+1)		•

Example No.	120	1H NMR(δ) ppm
HO N	-ОО-СН₃	300MHz, DMSO-d6 8. 23 (1H, s), 7. 99 (1H, d, J=8 . 7Hz), 7. 88 (1H, d, J=8. 4Hz) , 7. 61and7. 16 (4H, ABq, J=8. 6Hz), 7. 30-7. 22 (2H, m), 7. 0 1 (2H, d, J=8. 1Hz), 6. 92 (1H, t, J=7. 5Hz), 4. 28 (1H, m), 4. 25 (2H, t, J=7. 2Hz), 3. 83 (3H , s), 3. 07 (2H, t, J=7. 1Hz), 2 . 28 (2H, m) 2. 00-1. 75 (4H, m)
Purity >90%	(NMR)	, 1.70-1.55(1H, m), 1.50-1. 15(3H, m)
MS 471	(M+1)	

Table 31

Example No.

121

1H NMR(δ) ppm

300MHz, DMSO-d6
12. 85(1H, brs), 8. 24(1H, s), 8. 01(1H, d, J=8. 7Hz), 7. 90
(1H, d, J=8. 6Hz), 7. 62and, 7. 17(4H, ABq, J=8. 7Hz), 7. 24
(1H, m), 6. 94(2H, m), 6. 82(1H, m), 4. 32(2H, t, J=6. 7Hz), 3. 76(3H, s), 3. 07(2H, t, J=6. 7Hz), 3. 76(3H, s), 3. 07(2H, t, J=6. 7Hz), 2. 29(2H, m), 2. 00-1. 75(4H, m), 1. 70-1. 55(1H, m), 1. 50-1. 15(3H, m)

MS

471(M+1)

Example No.	22	1H NMR(δ) ppm
HO N O		300MHz, DMSO-d6 12.8(1H, brs), 8.22(1H, s), 7.87(2H, m), 7.62(2H, d, J=8 .1Hz), 7.60-7.20(7H, m), 5. 23(2H, s), 4.46(1H, m), 2.50 -2.30(2H, m), 1.70-1.40(10 H, m).
Purity >90% (NMR)		
MS . 441(M+1)		

Example No.	123	1H NMR(δ) ppm
HO N O		300MHz, DMSO-d6 8.24(1H, s), 7.97(1H, d, J=9 .0Hz), 7.87(1H, d, J=8.4Hz) ,7.65(2H, d, J=8.7Hz), 7.40 -7.05(9H, m), 7.03(2H, d, J= 8.4Hz), 4.31(1H, m), 4.18(2 H, t, J=6.6Hz), 2.81(2H, t, J=6.3Hz), 2.40-2.20(2H, m), 2.00-1.70(4H, m), 1.70-1.5 0(1H, m), 1.50-1.05(3H, m).
Purity >90% (NMR	.)	
MS 533 (M+1)		

Table 32

Example No.	124	1H NMR(δ) ppm
HO NO	<b>\</b>	300MHz, DMSO-d6 13.1(1H, brs), 8.29(1H, s), 8.17(1H, d, J=8.7Hz), 7.99( 1H, d, J=8.7Hz), 7.77(2H, d, J=8.7Hz), 7.40-7.20(8H, m), 6.84(1H, d, J=9.3Hz), 6.75 -6.72(2H, m), 4.36(1H, m), 4.22(2H, t, J=6.8Hz), 3.04(2H, t, J=6.7Hz), 2.40-2.15(2H, m), 2.15-1.95(2H, m), 1.9
Purity >90% (N)	MR)	5-1.75(2H, m), 1.75-1.55(1 H, m), 1.55-1.15(3H, m).
MS 533 (M+1)		·

Example No. 125	1H NMR(δ) ppm
HO N O	300MHz, DMSO-d6 8. 32(1H, s), 8. 28(1H, d, J=8 . 7Hz), 8. 05(1H, d, J=9. 0Hz), 7. 73(2H, d, J=9. 0Hz), 7. 43 (4H, d, J=7. 2Hz), 7. 36-7. 20 (8H, m), 4. 74(2H, d, J=7. 5Hz), 4. 3 8(1H, m), 2. 40-2. 15(2H, m), 2. 15-1. 95(2H, m), 1. 95-1. 8 5(2H, m), 1. 85-1. 55(1H, m),
Purity >90% (NMR)	1.55-1.20(3H, m).
MS 517 (M+1)	

Example No.	126	1H NMR(δ) ppm
HO N		300MHz, DMSO-d6 8. 32(1H, s), 8. 14(1H, d, J=8 . 7Hz), 8. 03(1H, d, J=8. 7Hz) , 7. 77(2H, d, J=9. 0Hz), 7. 52 -7. 31(7H, m), 5. 74(2H, m), 5 . 26(2H, s), 4. 61(1H, m), 2. 9 6(1H, m), 2. 60-2. 10(5H, m).
Purity >90	% (NMR)	
MS 4	25 (M+1)	

Table 33

Example No. 127	1H NMR(δ) ppm
HO NO O	300MHz, DMSO-d6 13. 2(1H, brs), 8. 33(1H, s), 8. 12(1H, d, J=8. 7Hz), 7. 96(1H, d, J=8. 8Hz), 7. 79(2H, d, J=8. 7Hz), 7. 52-7. 32(7H, m), 5. 26(2H, s), 4. 92(1H, d, J=49. 4Hz), 4. 57(1H, m), 2. 65-2. 35(2H, m), 2. 25-1. 50(6H, m).
Purity >90% (NMR)	
MS 445 (M+1)	1 !

Exampl	e No.	128	1H NMR(δ) ppm
НО		<b>&gt;</b> -€>	300MHz, DMSO-d6 8. 21(1H, s), 7. 92and7. 85(2 H, ABq, J=8. 6Hz), 7. 61and7. 06(4H, A'B'q, J=8. 6Hz), 7. 3 6-6. 91(9H, m), 4. 24(1H, brt , J=12. 2Hz), 2. 35-2. 15(2H, m), 1. 95-1. 75(4H, m), 1. 70- 1. 58(1H, m), 1. 48-1. 14(3H, m)
Purity	>90% (NMR)		
MS	505 (M+1)		·

Example No.	129	1H NMR(δ) ppm
HO N O		300MHz, DMSO-d6 8.21(1H, s), 7.92and7.86(2 H, ABq, J=8.6Hz), 7.69and7. 22(4H, A'B'q, J=8.6Hz), 7.5 2-7.39(1H, m), 7.47and7.41 (2H, A"B"q, J=8.1Hz), 6.91(1H, d, J=8.0Hz), 6.89(1H, d, J=8.2Hz), 6.75(1H, s), 4.36 -4.18(1H, m), 2.38-2.17(2H, m), 1.95-1.76(4H, m), 1.70
Purity >90% (NMR	2)	-1. 59 (1H, m), 1. 44-1. 19 (3H, m)
MS 505 (M+1)		, _,

Table 34

Example No.	130	1H NMR(δ) ppm
HO N O N O		300MHz, DMSO-d6 8. 27 (1H, s), 7. 69 (2H, d, J=8 . 6Hz), 7. 49-7. 21 (11H, m), 5 . 08and5. 03 (2H, ABq, J=12. 6 Hz), 5. 07-4. 99 (1H, m), 4. 26 (2H, d, J=6. 6Hz), 2. 40-2. 18 (2H, m), 2. 04-1. 77 (4H, m), 1 . 70-1. 58 (1H, m), 1. 48-1. 15 (3H, m)
Purity >90% (NMR)		
MS 590 (M+1)		

Example No. 13	
CF <sub>3</sub>	300MHz, DMSO-d6 8. 29(1H, s), 8. 11(1H, d, J=9 . 0Hz), 7. 96(1H, d, J=8. 4Hz) , 7. 80(2H, d, J=8. 1Hz), 7. 72 -7. 41(7H, m), 7. 12(1H, d, J= 12. 6Hz), 7. 01(1H, d, J=8. 4H z), 5. 12(2H, s), 4. 06(1H, m) , 2. 35-2. 10(2H, m), 2. 00-1. 75(4H, m), 1. 75-1. 55(1H, m) , 1. 60-1. 20(3H, m).
Purity >90% (NMR)	
MS 589 (M+1)	

Example No.	132	1H NMR(δ) ppon
HO NO		300MHz, DMSO-d6 12.8(1H, brs), 8.23(1H, s), 7.97(1H, d, J=8.7Hz), 7.87( 1H, d, J=8.6Hz), 7.66(2H, d, J=8.6Hz), 7.49-7.33(5H, m), 7.17-7.05(6H, m), 5.12(2H, s), 4.31(1H, m), 2.40-2.15 (2H, m), 2.05-1.20(8H, m).
Purity >90% (NMR)		
MS - 519 (M+1)		

Table 35

Example No.	133   1H NMR(δ) ppm
HO NO	300MHz, DMSO-d6 8. 57 (1H, s), 8. 01 (1H, d, J=8 . 7Hz), 7. 66 (1H, d, J=8. 7Hz) . 7. 51 (2H, d, J=8. 7Hz), 7. 31 (4H, d, J=8. 0Hz), 7. 16 (4H, d, J=8. 0Hz), 7. 09 (2H, d, J=8. 7Hz), 6. 26 (1H, s), 4. 37 (1H, m), 2. 41-2. 28 (2H, m), 2. 33 (6H, s), 2. 03-1. 84 (4H, m), 1. 77 (1H, m), 1. 45-1. 20 (3H, m)
Purity >90% (N	IR)
MS 531 (M+1)	

Example No.	134	1H NMR(δ) ppm
HO N O	√}-F	8. 59 (1H, d, J=1. 5Hz), 8. 02 (1H, dd, J=8. 7, 1. 5Hz), 7. 68 (1H, d, J=8. 7Hz), 7. 54 (2H, d, J=8. 8Hz), 7. 39 (4H, dd, J=8. 7, 5. 3Hz), 7. 08 (4H, d, J=8. 7 Hz), 7. 05 (2H, d, J=8. 8Hz), 6. 29 (1H, s), 4. 36 (1H, m), 2. 4 3-2. 19 (2H, m), 2. 04-1. 85 (4 H, m), 1. 78 (1H, m), 1. 45-1. 2 3 (3H, m).
Purity >90% (NM)	₹)	
MS 539 (M+1)		] · _

	1H NMR(δ) ppm
HO N O	300MHz, DMSO-d6 12. 34 (1H, brs), 7. 93 (1H, s) , 7. 55 (1H, d, J=8. 6Hz), 7. 33 -7. 15 (6H, m), 7. 11 (2H, d, J= 8. 6Hz), 4. 30-4. 20 (1H, m), 4 . 07 (2H, t, J=6. 3Hz), 3. 93 (3) H, s), 2. 78 (2H, t, J=7. 4Hz), 2. 35-2. 19 (2H, m), 2. 12-2. 0 0 (2H, m), 1. 91-1. 79 (4H, m), 1. 69-1. 60 (1H, m), 1. 47-1. 2
Purity >90% (NMR)	0 (3H, m)
MS 485 (M+1)	

Table 36

Example	No.	136	1H NMR(δ) ppm
НО	N - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 -	300MHz, DMSO-d6 8. 13 (1H, s), 7. 65 (2H, .7Hz), 7. 63 (1H, s), 7. 12 (7H, m), 4. 35-4. 20 (, 4. 10 (1H, t, J=6. 3Hz)) (2H, t, J=7. 5Hz), 2. 33 (8H, m), 1. 70-1. 16 (4H)	
Purity	>90% (NMR)		
MS	471 (M+1)		

Example No.	137	1H NMR(δ) ppm
HO N O		300MHz, DMSO-d6 8. 24 (1H, s), 8. 11 (1H, s), 7. 76 (2H, d, J=9. OHz), 7. 37-7. 16 (7H, m), 4. 43-4. 30 (1H, m), 4. 13 (2H, t, J=6. 3Hz), 2. 84 -2. 68 (5H, m), 2. 42-2. 22 (2H, m), 2. 18-1. 80 (6H, m), 1. 70 -1. 20 (4H, m)
Purity >90% (NMR)		
MS 469 (M+1)		

Example No.	138	1H NMR(δ) ppm
HO N O		300MHz, DMSO-d6 12. 73 (1H, brs), 8. 22 (1H, s) ,7. 76 (1H, d, J=8. 7Hz), 7. 85 (1H, d, J=8. 7Hz), 7. 54-7. 49 (4H, m), 7. 42-7. 21 (5H, m), 7 .11-7. 09 (3H, m), 6. 93 (1H, m ), 5. 17 (2H, s), 4. 29 (3H, m), 3. 11 (2H, m), 2. 40-2. 20 (2H, m), 1. 99-1. 23 (8H, m)
Purity > 90% (NMR)		
MS 547 (M+1)		

Table 37

Example No.	139	1H NMR(δ) ppm
HO TN-O		300MHz, DMSO-d6 12. 73 (1H, brs), 8. 22 (1H, s), 7. 93 (1H, d, J=8. 7Hz), 7. 73 (1H, m), 7. 60-7. 57 (2H, m), 7. 47-6. 90 (1H, m), 5. 11 (2H, s), 4. 33-4. 28 (3H, m), 3. 09-3. 04 (2H, t, J=6. 7Hz), 2. 35-2. 20 (2H, m), 1. 95-1. 10 (8H, m)
Purity >90%	(NMR)	
MS 547	(M+1)	

Example No.	140	1H NMR(δ) ppm.
HO N	->- ->- ->- ->- ->- ->- ->- ->- ->- ->-	300MHz, DMSO-d6 12. 83 (2H, brs), 8. 22 (1H, s), 7. 94 (1H, d, J=8. 7Hz), 7. 85 (1H, d, J=8. 4Hz), 7. 63-7. 60 (2H, m), 7. 26-7. 03 (6H, m), 4 . 73 (2H, s), 4. 30 (1H, m), 2. 4 0-2. 15 (2H, m), 2. 00-1. 20 (8 H, m)
Purity >90	% (NMR)	
MS 4	87 (M+1)	

Example No.	141	1H NMR(δ) ppm
HO NOO	о	300MHz, DMSO-d6 12. 87(1H, brs), 8. 24(1H, s), 7. 97(1H, d, J=9. 0Hz), 7. 87 (1H, d, J=8. 7Hz), 7. 69and7. 19(4H, ABq, J=8. 7Hz), 7. 36(1H, t, J=8. 7Hz), 6. 80-6. 72(3H, m), 4. 71(2H, s), 4. 32(1H, m), 2. 29(2H, m), 1. 95-1. 25(8H, m)
Purity >90% (	NMR)	·
MS 487 (M+	-1)	·

Table 38

Example No.	142	1H NMR(δ) ppm
но	CI	300MHz, DMSO-d6 8. 32 (1H, s), 8. 27 (1H, d, J=8 . 7Hz), 8. 05 (1H, d, J=9. 0Hz) , 7. 76-7. 72 (3H, m), 7. 54 (1H .d, J=8. 4Hz), 7. 39-7. 22 (7H ,m), 5. 11 (1H, s), 4. 36 (1H, m ), 2. 35 (3H, s), 2. 35-2. 15 (2 H, m), 2. 15-1. 95 (2H, m), 1. 9 5-1. 75 (2H, m), 1. 75-1. 55 (1 H, m), 1. 55-1. 15 (3H, m).
Purity >90% (NMR)		
MS ·	551 (M+1)	

Example No.	143 1H NMR(δ) ppm
HO N O	300MHz, DMSO-d6 13. 1 (1H, brs), 8. 30 (1H, s), 8. 24 (1H, d, J=8. 8Hz), 8. 03 ( 1H, d, J=8. 7Hz), 7. 74-7. 71 ( 3H, m), 7. 52 (1H, d, J=8. 3Hz), 7. 40-7. 36 (3H, m), 7. 23 (2H, d, J=8. 8Hz), 7. 01 (2H, d, J=8. 7Hz), 5. 11 (2H, s), 4. 35 (1H, m), 3. 79 (3H, s), 2. 45-2. 15 (2H, m), 2. 15-1. 95 (2H, m),
Purity >90% (NMR)	1.95-1.75(2H, m), 1.75-1.5 5(1H, m), 1.55-1.15(3H, m).
MS 567 (M+1)	

Example No. 144	1H NMR(δ) ppm
CF <sub>3</sub>	300MHz, DMSO-d6 13.0(1H, brs), 8.31(1H, s), 8.23(1H, d, J=8.7Hz), 8.04( 1H, d, J=8.7Hz), 7.80(2H, d, J=8.3Hz), 7.70-7.66(3H, m), 7.55-7.40(4H, m), 7.03-6. 95(2H, m), 5.08(2H, s), 4.03 (1H, m), 2.40-2.15(2H, m), 2.18(3H, s), 2.05-1.70(4H, m), 1.70-1.50(1H, m), 1.50-1
Purity >90% (NMR)	. 10 (3H, m).
MS 585 (M+1)	

Table 39

Example No.	145   1H NMR(δ) ppm	
HON	300MHz, DMSO-d6 8. 31(1H, s), 8. 23(1 . 8Hz), 8. 02(1H, d, J , 7. 73-7. 71(3H, m), , d, J=8. 3Hz), 7. 48( 8. 4Hz), 7. 41-7. 37( . 22(2H, d, J=8. 7Hz), H, s), 4. 34(1H, m), 2. 0(2H, m), 2. 15-1. 95 1. 95-1. 75(2H, m), 1.	=8. 7Hz) 7. 54 (1H 2H, d, J= 3H, m), 7 5. 13 (2 40-2. 2 (2H, m), 70-1. 5
Purity >90% (NMR)	5(1H, m), 1.50-1.15( 1.31(9H, s).	(3H, m),
MS 593 (M+1)		

Example No.	146	1H NMR(δ) ppm
HO F O	CI	300MHz, DMSO-d6 8. 29 (1H, s), 8. 13 (1H, d, J=8 . 7Hz), 7. 97 (1H, d, J=8. 6Hz) , 7. 76 (1H, d, J=2. 1Hz), 7. 63 (1H, t, J=8. 5Hz), 7. 57 (1H, d d, J=8. 2, 2. 2Hz), 7. 55-7. 35 (6H, m), 7. 15 (1H, d, J=12. 1H z), 7. 02 (1H, d, J=8. 6Hz), 5. 10 (2H, s), 4. 07 (1H, m), 2. 35 -2. 10 (2H, m), 2. 00-1. 70 (4H
Purity >90% (NMR)		.m), 1.70-1.55(1H, m), 1.50 -1.15(3H, m)
MS 555 (M+1)		*

Example No.	147	1H NMR(δ) ppm .
HO N CI-	CI	300MHz, CDC13 8. 61 (1H, s), 8. 04 (1H, d, J=8 .7Hz), 7. 69 (1H, d, J=8. 7Hz) , 7. 66 (1H, d, J=2. 4Hz), 7. 59 (2H, d, J=8. 7Hz), 7. 42 (1H, d d, J=8. 0, 2. 4Hz), 7. 38 (1H, t , J=1. 8Hz), 7. 28 (2H, d, J=1. 8Hz), 7. 26 (1H, d, J=8. 0Hz), 7. 03 (2H, d, J=8. 7Hz), 4. 94 ( 2H, s), 4. 37 (1H, m), 2. 43-2.
Purity >90% (NMR)	)	21 (2H, m), 2, 17-1, 86 (4H, m), 1, 79 (1H, m), 1, 43-1, 26 (3H)
MS 605 (M+1)		, m).

Table 40

Example No.	148	1H NMR(δ) ppm
HO N F	F	300MHz, DMSO-d6 8. 21 (s, 1H), 7. 89 (1H, d, J=8 .7Hz), 7. 87 (1H, d, J=8. 7Hz) ,7. 63-7. 46 (5H, m), 7. 30-7. 12 (5H, m), 7. 08 (1H, d, J=11. 0Hz), 6. 81 (1H, s), 3. 92 (1H, m), 2. 15-2. 06 (2H, m), 1. 89- 172 (4H, m), 1. 61 (1H, m), 1. 4 2-1. 09 (3H, m).
Purity >90% (NMI	?) ·	
MS 557 (M+1)		

Example No. 149

O CI
HO N CI

Example No.	150	1H NMR(δ) ppm
HO CF <sub>3</sub>		300MHz, DMSO-d6 8. 23 (1H, s), 8. 95 (1H, d, J=8 . 4Hz), 7. 88 (1H, d, J=8. 7Hz) . 7. 66 (1H, d, J=8. 4Hz), 7. 52 -7. 28 (7H, m), 7. 23 (2H, d, J= 9. 3Hz), 7. 14 (2H, d, J=8. 7Hz ), 5. 14 (2H, s), 3. 90-3. 72 (1 H, m), 2. 20-1. 10 (10H, m)
Purity >90%	(NMR)	
MS 587	(M+1)	:

Table 41

Example No.	151	1H NMR(δ) ppm
HO N Q	CF <sub>3</sub>	300MHz, DMSO-d6 8. 18 (1H, s), 7. 92-7. 78 (3H, m), 7. 78-7. 58 (3H, m), 7. 58-7. 44 (4H, m), 7. 29 (1H, d, J=8. 2Hz), 7. 01 (2H, d, J=8. 7Hz), 4. 88 (1H, d, J=11. 8Hz), 4. 80 (1H, d, J=11. 8Hz), 4. 22 (1H, m), 2. 37-2. 16 (2H, m), 1. 95-1. 75 (4H, m), 1. 64 (1H, m), 1. 48-1. 14 (3H, m).
Purity >90% (NM	R)	
MS 605 (M+1)		

Example No.	152	1H NMR(δ) ppm
HO N	NH <sub>2</sub>	300MHz, DMSO-d6 8. 21 (2H, m), 7. 99-7. 80 (2H, m), 7. 63-7. 08 (9H, m), 4. 20-3. 98 (4H, m), 2. 20-2. 15 (2H, m), 1. 95-1. 74 (4H, m), 1. 70-1. 54 (1H, m), 1. 44-1. 14 (3H, m)
Purity >90% (NM	R)	
MS 456 (M+1)		

Example No.	153	1H NMR(δ) ppm
HO N	-0	300MHz, DMSO-d6 8. 20 (1H, s), 8. 93and7. 83 (2 H, ABq, J=8. 7Hz), 7. 86-7. 21 (11H, m), 7. 03 (2H, d, J=8. 7H z), 4. 20 (1H, brt, J=12. 2Hz), 2. 32-2. 13 (2H, m), 1. 92-1. 74 (4H, m), 1. 69-1. 58 (1H, m) 1. 45-1. 15 (3H, m)
Purity > 90% (N	IMR)	
MS 489 (M+	1)	

Table 42

Example	No.	154	1H NMR(δ) ppm
но		·	300MHz, DMSO-d6 8. 23(1H, s), 7. 94and7. 86(2 H, ABq, J=8. 6Hz), 7. 72-7. 16 (13H, m), 5. 25(2H, brs), 4. 5 5(2H, d, J=6. 6Hz), 4. 31(1H, brt, J=12. 2Hz), 2. 37-2. 18( 2H, m), 1. 98-1. 77(4H, m), 1. 70-1. 58(1H, m), 1. 48-1. 20( 3H, m)
Purity	>90% (NMR)		
MS	489 (M+1)		·

Example No.	155	1H NMR(δ) ppm
HO N		300MHz, DMSO-d6 8. 21(1H, s), 7. 85and7. 61(2 H, ABq, J=8. 7Hz), 7. 61and6. 99(4H, A'B'q, J=8. 7Hz), 7. 2 8-7. 18(1H, m), 7. 25(2H, d, J =7. 5Hz), 7. 07-6. 99(1Hm), 4 . 30(1H, brt, J=12. 2Hz), 3. 8 3(2H, d, J=6. 0Hz), 3. 82-3. 7 2(1H, m), 2. 68-2. 49(2H, m), 2. 39-2. 21(2H, m), 1. 95-1. 8
Purity >90% (N	MR)	0(4H, m), 1.79-1.60(2H, m), 1.46-1.22(5H, m), 1.30(9H,
MS 626 (M+1	)	s), 1.00-0.82(2H, m)

Example No.	156	1H NMR(δ) ppm
HO N O	5-{\right\r	300MHz, DMSO-d6 8. 22(1H, s), 7. 92and7. 86(2 H, ABq, J=8. 7Hz), 7. 68and7. 18(4H, A'B'q, J=8. 7Hz), 7. 3 5(1H, t, J=8. 5Hz), 6. 80(1H, d, J=8. 3Hz), 6. 72-6. 70(2H, m) 4. 30(1H, brt, J=12. 2Hz), 3. 99(2H, brd, J=12. 0Hz), 3. 85(2H, d, J=6. 3Hz), 2. 82-2. 62(2H, m), 2. 38-2. 20(2H, m)
Purity >90% (	NMR)	, 1. 99-1. 59 (8H, m), 1. 42-1. 03 (5H, m), 1. 39 (9H, s)
MS 626 (M-	1)	

Table 43

Example	No.	157	1H NMR(δ) ppm
но	H <sub>3</sub> C. <sub>O</sub> CH <sub>3</sub>	O-CH₃	300MHz, DMSO-d6 12. 78 (1H, brs), 8. 22 (1H, s), 7. 96 (1H, d, J=8. 6Hz), 7. 86 (1H, d, J=8. 6Hz), 7. 75 (1H, d, J=2. 2Hz), 7. 60 (2H, d, J=8. 4Hz), 7. 55 (1H, dd, J=8. 3Hz), 7. 18 (2H, d, J=8. 4Hz), 6. 73 (2H, s), 5. 08 (2H, s), 4. 23 (1H, m), 3. 68 (9H, s), 2. 37-2. 17
Purity	>90% (NMR)		(2H, m), 1. 99-1. 79 (4H, m), 1 .65 (1H, s), 1. 49-1. 15 (3H, m
MS	627 (M+1)		.).

Example No	· .	159	1H NMR(δ) ppm
HO N			300MHz, DMSO-d6 12. 77(1H, brs), 8. 22(1H, s), 7. 95(1H, d, 8. 6Hz), 7. 86(1 H, d, 8. 6Hz), 7. 80(1H, s), 7. 70-7. 35(10H, m), 7. 27(2H, d, J=8. 7Hz), 5. 30(2H, s), 4. 2 8(1H, m), 2. 35-2. 15(2H, m), 1. 95-1. 75(4H, m), 1. 70-1. 5 5(1H, m), 1. 50-1. 15(3H, m)
Purity :	>90% (NM)	R)	
MS	503 (M+1)	· · · · · · · · · · · · · · · · · · ·	

Table 44

Example No.	160	lH NMR(δ) ppm
HON	HCI H	300MHz, DMSO-d6 8. 90 (1H, brs), 8. 59 (1h, brs), 8. 33 (1H, s), 8. 18and8. 00 (2H, ABq, J=8. 5Hz), 7. 73and 7. 10 (4H, A'B'q, J=8. 5Hz), 7. . 32-7. 05 (4H, m), 4. 35 (1H, brt, J=12. 2Hz), 3. 86 (2H, d, J=6. 3Hz), 3. 25-3. 08 (2H, m), 2. 85-2. 66 (2H, m), 2. 40-2. 28 (2H, m), 2. 07-1. 14 (15H, m)
Purity >90%	(NMR)	
MS 526	(M+1)	

Example No.	161	1H NMR(δ) ppm
HO N O	НСІ	, m), 4. 37 (1H, brt, J=12. 2Hz ), 3. 89 (2H, d, J=5. 0Hz), 3. 3 5-3. 18 (2H, m), 2. 98-2. 75 (2 H, m), 2. 38-2. 17 (2H, m), 2. 1
Purity >90% (NMR)		6-1. 15 (15H, m)
MS 526 (M+1)		

Example No. 162	IH NMR(δ) ppm
HO N O N	300MHz, DMSO-d6 12. 87(1H, brs), 8. 58(1H, d, J=6. 0Hz), 8. 23(1H, s), 7. 99 and 7. 80(2H, ABq, J=8. 6Hz), 7. 61and 7. 18(4H, A'B'q, J=8. 0Hz), 7. 45-7. 30(5H, m), 5. 29(1H, brs), 4. 26(1H, brt, J=12. 2Hz), 2. 37-2. 11(2H, m), 2. 00-1. 71(4H, m), 1. 92(3H, s), 1. 70-1. 52(1H, m), 1. 45
Purity >90% (NMR)	-1. 11 (3H, m)
MS 498(M+1)	·

Table 45

Example No.	163	1H NMR(δ) ppm
HO CIN Society	<i>_</i> _<	300MHz, DMSO-d6 8. 23 (1H, s), 7. 95and7. 86 (2 H, ABq, J=8. 6Hz), 7. 69and7. 18 (4H, A'B'q, J=8. 6Hz), 7. 3 5 (1H, t, J=8. 6Hz), 6. 80 (1H, d, J=7. 5Hz), 6. 72-6. 69 (2H, m), 5. 20 (1H, t, J=3. 7Hz), 4. 31 (1H, brt, J=12. 2Hz), 3. 95 (2H, t, J=6. 8Hz), 2. 49-2. 19 (4H, m), 1. 97-1. 76 (4H, m), 1
Purity >90% (NMR)	•	. 68 (3H, s), 1. 67-1. 54 (1H, m), 1. 61 (3H, s), 1. 45-1. 20 (3
MS 511 (M+1)		H, m)

Example No.	164	1H NMR(δ) ppm
HO N O	· <b>&gt;</b>	300MHz, DMSO-d6 8. 20 (1H, s), 7. 87 (2H, s), 7. 68and7. 18 (4H, ABq, J=8. 7Hz), 7. 35 (1H, t, J=7. 9Hz), 6. 8 1 (1H, d, J=9. 4Hz), 6. 72 (1Hs), 6. 71 (1H, d, J=6. 8Hz), 4. 8 0 (2H, s), 4. 29 (1H, brt, J=12. 2Hz), 4. 10 (1H, t, J=6. 7Hz), 2. 43 (1H, t, J=6. 7Hz), 2. 39 -2. 19 (2H, m), 1. 97-1. 78 (4H
Purity >90% (NMR)		, m), 1.76(3H, s), 1.70-1.56 (1H, m), 1.43-1.19(3H, m)
MS 497 (M+1)		(0.00)

Example No.	165 IH NMR(δ) ppm
HCI HCI	300MHz, DMSO-d6 11. 21 (1H, brs), 8. 33 (1H, s) , 8. 25 (1H, d, J=8. 6Hz), 8. 04 (1H, d, J=8. 6Hz), 7. 78 (2H, d , J=8. 7Hz), 7. 70-7. 67 (2H, m ), 7. 55-7. 42 (3H, m), 7. 27 (2 H, d, J=8. 7Hz), 4. 73-4. 30 (5 H, m), 4. 20-3. 97 (1H, m), 3. 4 2-3. 10 (2H, m), 2. 45-1. 23 (1 4H, m)
Purity >90% (NMR)	
MS	

Table 46

Example No.	166	1H NMR(δ) ppm
HO N	S O CI	300MHz, DMSO-d6 8. 27(1H, s), 8. 13(1H, d, J=8 . 4Hz), 7. 97(1H, d, J=9. 0Hz) , 7. 73(1H, d, J=1. 8Hz), 7. 68 (2H, d, J=8. 4Hz), 7. 54(1H, d d, J=8. 4, 2. 1Hz), 7. 41-7. 31 (5H, m), 7. 19(2H, d, J=8. 4Hz ), 5. 10(2H, s), 4. 32(1H, m), 2. 50(3H, s), 2. 40-2. 15(2H, m), 2. 10-1. 75(4H, m), 1. 75-
Purity > 9	0% (NMR)	1.55(1H, m), 1.55-1.10(3H, m).
MS	583 (M+1)	

.10

Example No.	167	1H NMR(δ) ppm
HO N O	CI	300MHz, DMSO-d6 8. 25(1H, s), 8. 09(1H, d, J=8 . 4Hz), 8. 00(2H, d, J=8. 4Hz) , 7. 94(1H, d, J=8. 7Hz), 7. 80 (1H, d, J=2. 1Hz), 7. 73(2H, d , J=8. 1Hz), 7. 65(2H, d, J=8. 7Hz), 7. 60(1H, dd, J=8. 1, 2. 1Hz), 7. 44(1H, d, J=8. 1Hz), 7. 16(2H, d, J=8. 7Hz), 5. 13( 2H, s), 4. 30(1H, m), 3. 26(3H
Purity >90% (NMR)		, s), 2.40-1.15(2H, m), 2.05 -1.75(4H, m), 1.75-1.55(1H
MS 615 (M+1)	•	, m), 1.55-1.15(3H, m).

Example No.	168	1H NMR(δ) ppm
HO N S	CI	300MHz, DMSO-d6 13.1(1H, brs), 8.32(1H, s), 8.28(1H, d, J=8.8Hz), 8.05( 1H, d, J=8.7Hz), 7.80-7.75( 3H, m), 7.69(1H, d, J=4.1Hz), 7.57(2H, m), 7.34-7.29(3H, m), 7.20-7.15(1H, m), 5.24(2H, s), 4.39(1H, m), 2.45-2.20(2H, m), 2.20-1.95(2H, m), 1.95-1.75(2H, m), 1.75-1
Purity >90% (NMR)	)	. 55 (1H, m), 1. 55-1. 15 (3H, m ).
MS 543 (M+1)		

Table 47

.169

Example No.

Purity

MS

HO N CI

>90% (NMR)

571 (M+1)

300MHz, DMSO-d6 8. 31 (1H, s), 8. 26 (1H, d, J=8 .7Hz), 8. 05 (1H, d, J=8. 7Hz) .7. 78-7. 71 (3H, m), 7. 59-7. 41 (6H, m), 7. 23 (2H, d, J=9. 0 Hz), 5. 11 (2H, s), 4. 35 (1H, m ), 2. 40-2. 15 (2H, m), 2. 15-1 .95 (2H, m), 1. 95-1. 75 (2H, m ), 1. 75-1. 55 (1H, m), 1. 55-1 .15 (3H, m).

1H NMR(δ) ppm

20

15

25

30

35

40

45

55

Example No.	170	1H NMR(δ) ppm .
HO NO	CI	300MHz, DMSO-d6 12.7(1H, brs), 8.66(1H, s), 8.61(1H, m), 8.21(1H, s), 7. 92-7.79(4H, m), 7.61-7.56( 3H, m), 7.50-7.43(2H, m), 7. 10(2H, d, J=8.7Hz), 5.09(2H, s), 4.26(1H, m), 2.40-2.15 (2H, m), 2.00-1.75(4H, m), 1.75-1.55(1H, m), 1.50-1.15 (3H, m).
Purity >90% (NMR)		
MS 538 (M+1)		

	Example No.	171	1H NMR(δ) ppm
	HO N	) CI	300MHz, DMSO-d6 8. 31 (1H, s), 8. 25 (1H, d, J=8 .7Hz), 8. 04 (1H, d, J=8. 7Hz) .7. 74-7. 71 (3H, m), 7. 57-7. 46 (3H, m), 7. 39 (1H, d, J=8. 1 Hz), 7. 31-7. 21 (4H, m), 5. 11 (2H, s), 4. 35 (1H, m), 2. 40-2 .15 (2H, m), 2. 15-1. 95 (2H, m ), 1. 95-1. 75 (2H, m), 1. 75-1 .55 (1H, m), 1. 55-1. 15 (3H, m
L	Purity > 90%	(NMR)	.).
L	MS 555 (	M+1)	

Table 48

Example No. 172	
HO N FO	300MHz, DMSO-d6 8. 24 (1H, s), 7. 99 (1H, d, J=8 . 7Hz), 7. 88 (1H, d, J=10. 5Hz ), 7. 70 (1H; dd, J=11. 4, 1. 8H z), 7. 48-7. 32 (6H, m), 7. 17- 7. 09 (5H, m), 5. 12 (2H, s), 4. 30 (1H, m), 2. 40-2. 15 (2H, m) , 2. 05-1. 75 (4H, m), 1. 75-1. 55 (1H, m), 1. 55-1. 20 (3H, m)
Purity >90% (NMR)	
MS 537 (M+1)	

Example No. 173	1H NMR(δ) ppm
HO N O Br	300MHz, DMSO-d6 8. 33 (1H, s), 8. 29 (1H, d, J=8 . 7Hz), 8. 06 (1H, d, J=8. 7Hz) , 7. 82-7. 74 (4H, m), 7. 45 (1H , dd, J=8. 4, 3. 0Hz), 7. 39 (2H , d, J=8. 7Hz), 5. 28 (2H, s), 4 . 40 (1H, m), 2. 40-2. 15 (2H, m ), 2. 15-1. 95 (2H, m), 1. 95-1 . 75 (2H, m), 1. 75-1. 55 (1H, m ), 1. 55-1. 15 (3H, m).
Purity >90% (NMR)	
MS 540 (M+1)	•

Example	No.	174	IH NMR(δ) ppm
но	CI N N O	Cı	300MHz, DMSO-d6 12.80(1H, brs), 8.26(1H, s) ,8.01(1H, d, J=8.7Hz), 7.85 (1H, d, J=8.7Hz), 7.80-7.70 (1H, m), 7.60-7.36(7H, m); 7 .18-6.91(2H, m), 5.09(2H, s ), 4.11-3.90(1H, m), 2.32-1 .18(14H, m)
Purity	>90% (NMR	)	·
MS	590 (M+1)		

Table 49

Example No.	175	1H NMR(δ) ppm
HO N		300MHz, DMSO-d6 12.75(1H, s), 8.21(1H, s), 7 .94and7.85(2H, ABq, J=8.7H z), 7.61and7.00(4H, A'B'q, J=8.5Hz), 7.31-6.91(2H, m) ,7.25(2H, d, J=7.7Hz), 5.41 (2H, brs), 4.54(2H, d, J=6.6 Hz), 4.35-4.14(2H, m), 2.49 -2.15(3H, m), 1.95-1.55(5H, m), 1.50-1.13(5H, m), 1.10
Purity >90%	(NMR)	-0. 77 (2H, m)
MS 568	(M+1)	

Example No.	17	77 IH NMR(δ) ppm
HO N		300MHz, DMSO-d6 12. 76 (1H, s), 8. 23 (1H, s), 7. 96and7. 86 (2H, ABq, J=8. 6Hz), 7. 69and7. 20 (4H, A'B'q, J=8. 6Hz), 7. 39 (1H, t, J=8. 2 Hz), 6. 86 (1H, d, J=8. 3Hz), 6. 81 (1H, s), 6. 76 (1h, d, J=8. 0Hz), 4. 83 (2H, s), 4. 31 (1H, brt, J=12. 2Hz), 2. 39-2. 19 (2H, m), 1. 99-1. 79 (4H, m), 1.
Purity >9	0% (NMR)	70-1.58(1H, m), 1.48-1.20(3H, m)
MS .	467 (M+1)	

Table 50

.

Example No.	178	1H NMR(δ) ppm
HO N O	~~~	300MHz, DMSO-d6 12. 85 (1H, s), 8. 75 (1H, s), 8. 63 (2H, d, J=3. 8Hz), 8. 25 (1 H, s), 8. 04-8. 01 (2H, m), 8. 0 2and7. 90 (2H, ABq, J=8. 6Hz), 7. 72and7. 20 (4H, A'B'q, J=8. 6Hz), 7. 57 (2H, dd, J=7. 8, 5. 0Hz), 7. 40 (1H, t, J=8. 2Hz), 6. 93 (1H, d, J=8. 2Hz), 6. 8 7 (1H, s), 6. 77 (1H, d, J=8. 2Hz)
Purity > 90% (NMR)		z), 5. 23 (2H, s), 4. 33 (1H, br t, J=12. 2Hz), 2. 40-2. 18 (2H
MS 520 (M+1)	]	, m), 2.00-1.55(5H, m), 1.50 -1 15(3H m)

Example No.	179	IH NMR(δ) ppm.
HO NO O		300MHz, DMSO-d6 8.32(1H, s), 8.29(1H, d, J=9 .0Hz), 8.06(1H, d, J=8.7Hz) ,7.61(1H, d, J=8.4Hz), 7.58 -7.32(5H, m), 6.98(1H, d, J= 2.1Hz), 6.93(1H, dd, J=8.7, 2.1Hz), 5.27(2H, s), 4.16-4 .00(1H, m), 3.87(3H, s), 2.2 0-2.12(2H, m), 2.02-1.98(4 H, m), 1.70-1.60(1H, m), 1.5
Purity >90% (NMR)		2-1. 10 (3H, m)
MS 457 (M+1)		• •

Example No.	180	1H NMR(δ) ppm
HO N	oBr O-	300MHz, DMSO-d6 8. 21 (1H, s), 7. 91 (1H, d, J=8 .6Hz), 7. 85 (1H, d, J=8. 6Hz) , 7. 63 (2H, d, J=8. 4Hz), 7. 60 (1H, d, J=9. 0Hz), 7. 25 (2H, d , J=8. 4Hz), 7. 23 (1H, d, J=3. 0Hz), 6. 95 (1H, dd, J=9. 0, 3. 0Hz), 5. 19 (2H, s), 4. 30 (1H, m), 3. 78 (3H, s), 2. 40-2. 19 ( 2H, m), 2. 00-1. 87 (4H, m), 1.
Purity >90% ()	NMR)	66(1H, m), 1.49-1.18(3H, m)
MS 536 (M-	-1)	

Table 51

Example No. 181	1H.NMR(δ) ppm
HO N O O O O O O	300MHz, DMSO-d6 8. 19 (1H, s), 7. 95 (1H, d, J=8 .7Hz), 7. 86 (1H, d, J=8. 7Hz) , 7. 65 (4H, d, J=7. 4Hz), 7. 47 (2H, d, J=8. 7Hz), 7. 44-7. 27 (6H, m), 6. 99 (2H, d, J=8. 7Hz), 4. 20 (1H, m), 2. 34-2. 12 (2H, m), 1. 98-1. 75 (4H, m), 1. 6 4 (1H, m), 1. 46-1. 13 (3H, m).
Purity >90% (NMR)	
MS 547 (M+1)	

Example No.

Cl
NO2

HO
NO2

Purity > 90% (NMR)

182

IH NMR(δ) ppm

300MHz, DMSO-d6
8. 55(1H, d, J=2. 1Hz), 8. 32(1H, m), 8. 21(1H, s), 7. 95(1H, d, J=8. 4Hz), 7. 86(1H, d, J=7. 8Hz), 7. 68-7. 56(7H, m), 7. 14(2H, d, J=8. 7Hz), 5. 21(1H, s), 4. 26(1H, m), 2. 35-2. 1 5(2H, m), 2. 00-1. 75(4H, m), 1. 74-1. 55(1H, m), 1. 50-1. 1 5(3H, m)

MS

582(M+)

Example	No.	183	1H NMR(δ) ppm
НО	CI CI	N CH <sub>3</sub>	300MHz, DMSO-d6 10. 16(1H, s), 8. 25(1H, s), 8 .07(1H, d, J=8. 7Hz), 7. 94-7 .87(2H, m), 7. 71-7. 62(3H, m ), 7. 50-7. 42(4H, m), 7. 30(1 H, d, J=8. 4Hz), 7. 14(2H, d, J =8. 4Hz), 5. 06(2H, s), 4. 31(1 1H, m), 2. 35-2. 15(2H, m), 2. 05-1. 75(4H, m), 1. 75-1. 55(1H, m), 1. 50-1. 15(3H, m)
Purity	>90% (NM	R)	
MS	. 594 (M+)		

Table 52

Example No. 184	1H NMR(δ) ppm
HO N CI	300MHz, DMSO-d6 13. 2(2H, brs), 8. 30(1H, s), 8. 26(1H, d, J=8. 8Hz), 8. 04( 1H, d, J=8. 8Hz), 8. 00(2H, d, J=8. 2Hz), 7. 79(1H, s), 7. 73(2H, d, J=8. 7Hz), 7. 61-7. 56(3H, m), 7. 44(1H, d, J=8. 3Hz), 7. 23(2H, d, J=8. 8Hz), 5. 13(2H, s), 4. 35(1H, m), 2. 45-2. 15(2H, m), 2. 15-1. 95(2H,
Purity >90% (NMR)	m), 1.95-1.75(1H, m), 1.75- 1.15(3H, m).
MS 581 (M+1)	

Example	No.	185	1H NMR(δ) ppm
но			300MHz, DMSO-d6 8. 30 (1H, m), 8. 24 (1H, d, J=9 . 0Hz), 8. 03 (1H, d, J=9. 0Hz) , 7. 79-7. 10 (9H, m), 5. 20-5. 07 (2H, m), 4. 43-4. 04 (4H, m) , 3. 50-3. 36 (2H, m), 2. 40-1. 19 (14H, m)
Purity	>90% (NMR	)	
MS	554 (M+1)		

Example No.	186	1H NMR(δ) ppm
HO CI	CF <sub>3</sub>	(DMSO-d6) & :8. 29(1H, brs), 8. 10(1H, d, J=8. 4Hz), 7. 97 (1H, d, J=8. 4Hz), 7. 79(2H, d, J=8. 4Hz), 7. 74-7. 67(1H, m), 7. 68(2H, d, J=8. 4Hz), 7. 6 1(1H, d, J=8. 4Hz), 7. 57-7. 5 0(2H, m), 7. 46-7. 39(1H, m), 7. 29(1H, d, J=2. 4Hz), 7. 11(1H, dd, J=2. 4, 8. 4Hz), 5. 12(2H, s), 3. 99-3. 84(1H, m), 2.
Purity >90%	(NMR)	35-1.72(6H, m), 1.68-1.55( 1H, m), 1.42-1.10(3H, m)
MS 605	M+1)	

Table 53

Example	No.	187	1H NMR(δ) ppm
но			300MHz, DMSO-d6 12. 76 (1H, s), 8. 57 (1H, d, J= 4. 4Hz), 8. 23 (1H, s), 7. 96an d7. 86 (2H, ABq, J=8. 2Hz), 7. 87-7. 82 (1H, m), 7. 68and7. 1 2 (4H, A'B'q, J=8. 6Hz), 7. 53 (2H, d, J=7. 8Hz), 7. 37 (1H, t J=8. 3Hz), 7. 36-7. 33 (1H, m ), 6. 90 (1H, d, J=8. 3Hz), 6. 8 3 (1H, s), 6. 74 (1H, d, J=8. 0H
Purity	>90% (NMR)		z), 5. 20(2H, s), 4. 31 (1H, br t, J=12. 2Hz), 2. 35-2. 19(2H
MS	520 (M+1)		, m), 1.99-1.57(5H, m), 1.45

Example No. 188	1H NMR(δ) ppm
HO N F	300MHz, DMSO-d6 12. 77 (1H, brs), 8. 21 (1H, d, J=1, 4Hz), 7. 92 (1H, d, J=8. 7 Hz), 7. 88 (1H, dd, J=8. 7, 1. 4 Hz), 7. 57 (2H, d, J=8. 7Hz), 7. 57-7. 27 (7H, m), 7. 11 (2H, d, J=8. 7Hz), 5. 07 (2H, s), 4. 2 6 (1H, m), 2. 36-2. 16 (2H, m), 1. 98-1. 75 (4H, m), 1. 64 (1H, m), 1. 49-1. 17 (3H, m).
Purity >90% (NMR)	
MS 555 (M+1)	

Example	No.	189	1H NMR(δ) ppm
но	C N C	-01	300MHz, DMSO-d6 8. 32(1H, s), 8. 30-8. 20(2H, m), 8. 10-7. 98(2H, m), 7. 74(2H, d, J=9.0Hz), 7. 60-7. 46(5H, m), 7. 24(2H, d, J=9.0Hz), 5. 19(2H, s), 4. 44-4. 30(1H, m), 2. 40-2. 20(2H, m), 2. 12-1. 78(4H, m), 1. 72-1. 58(4H, m)
Purity	>90%	(NMR)	
MS	581	(M+1) ·	1

Table 54

Example No.	190	1H NMR(δ) ppm
HO N CI	⟩ }NH <sub>2</sub>	300MHz, DMSO-d6 8. 36-7. 90 (5H, m), 7. 74 (2H, d, J=8. 6Hz), 7. 60-7. 40 (5H, m), 7. 25 (2H, d, J=8. 7Hz), 5. 14 (2H, s), 4. 45-4. 28 (1H, m), 2. 40-2. 15 (4H, m), 1. 75-1. 55 (1H, m), 1. 55-1. 20 (3H, m)
Purity > 90% (NMR)		
MS 580 (M+1)		

Example	No.	191	1H NMR(δ) ppm
но		CH₃ N CH₃	300MHz, DMSO-d6 8. 22 (1H, s), 7. 94 (1H, d, J=8 .4Hz), 7. 85 (1H, d, J=8. 7Hz) ,7. 61 (2H, d, J=8. 7Hz), 7. 25 -7. 00 (6H, m), 4. 86 (2H, s), 4 .30 (1H, m), 2. 89 (3H, s), 2. 8 0 (3H, s), 2. 29 (2H, m), 2. 00- 1. 75 (4H, m), 1. 70-1. 55 (1H, m), 1. 50-1. 15 (3H, m)
Purity	>90% (NMR)		
MS	514 (M+1)		

Example No.	192	1H NMR(δ) ppm
HO N	-N	300MHz, DMSO-d6 8. 22(1H, s), 7. 94(1H, d, J=8 . 4Hz), 7. 85(1H, d, J=8. 7Hz) , 7. 61(2H, d, J=8. 7Hz), 7. 26 -7. 01(6H, m), 4. 84(2H, s), 4 . 31(1H, m), 3. 36(4H, m), 2. 2 9(2H, m), 2. 00-1. 75(4H, m), 1. 75-1. 15(10H, m)
Purity > 90% (NMR)		
MS 554 (M+1)		

Table 55

Example No. 193

OHO

N
O=S=O

Purity > 90% (NMR)

MS 560(M+1)

193

IH NMR(δ) ppm

300MHz, DMSO-d6
13. 00(1H, brs), 8. 29(1H, d, J=8. 8 Hz), 7. 97(1H, dd, J=1. 4Hz, 8 .8 Hz), 7. 89(2H, d, J=8. 8Hz), 7. 89(2H, d, J=8. 8Hz), 7. 80-7. 60(5H, m) 7. 25(2H, d, J=8. 8Hz), 4. 47-3. 90(4H, m), 3. 20-3. 10(2H, m), 2. 41-1. 22(14H, m)

Example No.	195	1H NMR(δ) ppm
но	O=NH <sub>2</sub> CI	300MHz, DMSO-d6 8. 25 (1H, s), 8. 09-7. 92 (5H, m), 7. 77 (1H, s), 7. 65 (2H, d, J=8. 4Hz), 7. 59-7. 51 (3H, m), 7. 43 (2H, d, J=8. 4Hz), 7. 17 (2H, d, J=8. 7Hz), 5. 10 (2H, s), 4. 30 (1H, m), 2. 40-2. 15 (2H, m), 2. 10-1. 75 (4H, m), 1. 75-1. 55 (1H, m), 1. 55-1. 10 (3H, m).
Purity >90%	(NMR)	
MS 580	(M+1)	

Table 56

Example No. 196	1H NMR(δ) ppm
HO N-CH <sub>3</sub>	300MHz, DMSO-d6 8. 22(1H, s), 7. 95(1H, d, J=8 . 4Hz), 7. 86(1H, d, J=8. 4Hz) , 7. 69and7. 18(4H, ABq, J=8. 7Hz), 7. 34(1H, t, J=8. 0Hz), 6. 80-6. 69(3H, m), 4. 83(2H, s), 4. 31(1H, m), 2. 98(3H, s) , 2. 84(3H, s), 2. 29(2H, m), 2 . 00-1. 75(4H, m), 1. 70-1. 55 (1H, m), 1. 50-1. 15(3H, m)
Purity >90% (NMR)	
MS 514 (M+1)	. ,

Example No.	197	1H NMR(δ) ppm
HO N O	() 2 0	300MHz, DMSO-d6 8. 23(1H, s), 7. 95(1H, d, J=8.4Hz), 7. 86(1H, d, J=8.7Hz), 7. 69and7. 18(4H, ABq, J=8.7Hz), 7. 35(1H, t, J=8.4Hz), 6. 80-6. 70(3H, m), 4. 82(2H, s), 4. 31(1H, m), 3. 40(4H, m), 2. 29(2H, m), 2. 00-1. 75(4H, m), 1. 70-1. 15(10H, m)
Purity > 90% (NMR)		
MS 554 (M+1)		

Example No. 198	1H NMR(δ) ppm
HO N S-CH <sub>3</sub>	, t, J=7.8Hz), 6.82(1H, d, J= 9.3Hz), 6.73(1H, s), 6.71(1 H, d, J=7.2Hz), 4.30(1H, brt , J=12.2Hz), 3.89(2H, d, J=6 .0Hz), 3.59(2H, d, J=11.7Hz
Purity >90% (NMR)	), 2. 85 (3H, s), 2. 73 (2H, t, J =10. 5Hz), 2. 41-2. 20 (2H, m)
MS 604 (M+1)	, 1. 98-1. 59 (8H, m), 1. 46-1.

Table 57

Example	No.	199
но		CI O O
Purity	>90% (N	MR)
MS.	542 (M+1	) .

300MHz, DMSO-d6 8. 33 (1H, s), 8. 30 (1H, d, J=8 . 9Hz), 8. 06 (1H, d, J=8. 7Hz) ,7. 79 (2H, d, J=8. 7Hz), 7. 70 (2H, d, J=8. 7Hz), 7. 61 (2H, d ,J=8. 7Hz), 7. 39 (2H, d, J=8. 8Hz), 5. 28 (2H, s), 4. 39 (1H, m), 2. 50-2. 15 (2H, m), 2. 15-1. 95 (2H, m), 1. 95-1. 75 (2H, m), 1. 75-1. 55 (1H, m), 1. 55-1. 15 (3H, m).

1H NMR(δ) ppm

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Example	No.	200	1H NMR(δ)
но		-{S	(DMSO-d6) & . 96 (1H, d, J H, d, J=8.6H = 8.4Hz), 7. 30 (4H, m) . 4Hz), 6.90 , 6.84 (1H, s, 8.3Hz), 5.11 . 21 (1H, m), 1.99-1.80
Purity	>90% (NMR)		.59(1H, m),
MS	553 (M+1)		•

1H NMR(δ) ppm (DMSO-d6) δ:8.23(1H, s), 7 .96(1H, d, J=8.6Hz), 7.86(1 H, d, J=8.6Hz), 7.69(2H, d, J =8.4Hz), 7.52(1H, s), 7.50-7.30(4H, m), 7.18(2H, d, J=8.4Hz), 6.90(1H, d, J=8.3Hz), 6.84(1H, s), 6.74(1H, d, J=8.3Hz), 6.84(1H, s), 6.74(1H, d, J=8.3Hz), 21(1H, m), 2.39-2.18(2H, m), 1.99-1.80(4H, m), 1.71-1 .59(1H, m), 1.50-1.20(3H, m)

-	Example No.	201
	HO N O	
L	Purity > 90% (NM)	R)
L	MS 553 (M+1)	

1H NMR( $\delta$ ) ppm (DMSO-d6)  $\delta$ :8.26(1H, s), 8.06(1H, d, J=8.7Hz), 7.92(1 H, d, J=8.7Hz), 7.72(2H, d, J=8.7Hz), 7.47(4H, s), 7.38(1H, t, J=8.2Hz), 7.20(2H, d, J=8.7Hz), 6.90(1H, d, J=8.2 Hz), 6.83(1H, s), 6.74(1H, d, J=8.2Hz), 5.14(2H, s), 2.40-2.19(2H, m), 2.04-1.78(4 H, m), 1.71-1.60(1H, m), 1.50-1.21(3H, m)

Table 58 '

Example No.	: •	202	1H NMR(δ) ppm
но		<b>~</b> F	(DMSO-d6) $\delta$ : 12. 81 (1H, brs), 8. 24 (1H, s), 7. 99 (1H, d, J=8. 7Hz), 7. 87 (1H, d, J=8. 7Hz), 7. 69 (2H, d, J=8. 6Hz), 7. 53-7. 47 (2H, m), 7. 38 (1H, t, J=8. 2Hz), 7. 26-7. 16 (4H, m), 6. 89 (1H, d, J=8. 2Hz), 6. 82 (1H, s), 6. 73 (1H, d, J=8. 2Hz), 5. 11 (2H, s), 4. 40-4. 21 (1H, m), 2. 40-2. 17 (2H, m), 2. 0
Purity >90	% (NMR)		1-1.77 (4H, m), 1.71-1.59 (1 H, m), 1.50-1.20 (3H, m)
MS 5:	37 (M+1)		

Example No.	203	1H NMR(δ) ppm
но	O <sub>N</sub> , N NO <sub>2</sub>	300MHz, DMSO-d6 12. 74(1H, brs), 8. 21(1H, s), 8. 08(2H, d, J=9. 0Hz), 7. 93 (1H, d, J=8. 7Hz), 7. 85(2h, d, J=8. 7Hz), 7. 13(2H, d, J=8. 7Hz), 6. 83(2H, d, J=9. 0Hz), 4. 50-4. 08(4H, m), 3. 68-3. 30(2H, m), 2. 40-1. 23(14H, m)
Purity > >90% (N	IMR)	
MS . 541 (M+	1)	

Example No.	204	1H NMR(δ) ppm
HCI		300MHz, DMSO-d6 8. 39-8. 28 (2H, m), 8. 08 (1H, d, J=8. 8Hz), 7. 76 (2H, d, J=8. 7Hz), 7. 29 (2H, d, J=8. 7Hz), 7. 25-7. 13 (2H. m), 6. 80-6. 60 (3H, m), 4. 46-3. 98 (4H, m), 3. 51-3. 42 (1H, m), 3. 20-3. 04 (1H, m), 2. 39-1. 20 (14H, m)
Purity >90% (NMR	1)	

Table 59

Example No.	. 205	1H NMR(δ) ppm
HO NO O	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	300MHz, DMSO-d6 9. 59 (1H, brs), 8. 23 (1H, s), 8. 04 (1H, d, J=8. 4Hz), 7. 90 ( 1H, d, J=8. 4Hz), 7. 62 (2H, d, J=8. 7Hz), 7. 39 (2H, 2H, d, J=8. 7Hz), 7. 18 (2H, d, J=8. 7Hz), 6. 63 (2H, d, J=8. 7Hz), 3. 95 -3. 37 (4H, m), 3. 51-3. 40 (1H, m), 3. 17-3. 02 (1H. m), 2. 39 -1. 18 (17H, m)
Purity > 90% (N)	AR)	
MS 553 (M+1)		

Example No.	206	1H NMR(δ) ppm
но	CI	300MHz, DMSO-d6 13. 1 (1H, brs), 8. 33 (1H, s), 8. 29 (1H, d, J=8. 8Hz), 8. 06 ( 1H, d, J=8. 7Hz), 7. 77 (2H, d, J=8. 7Hz), 7. 59-7. 52 (4H, m), 7. 35 (2H, d, J=8. 8Hz), 5. 19 (2H, s), 4. 39 (1H, m), 2. 71 (3 H, s), 2. 45-2. 20 (2H, m), 2. 2 0-1. 95 (2H, m), 1. 95-1. 75 (2 H, m), 1. 75-1. 55 (1H, m), 1. 5
Purity > 90% (N	NMR)	5-1. 15 (3H, m).
MS 558 (M+	1)	

Example No.	207   1H NMR(δ) ppm
HO	300MHz, DMSO-d6 8. 29 (1H, s), 8. 26 (1H, d, J=8 .8Hz), 8. 04 (1H, d, J=8. 7Hz) .7. 73 (2H, d, J=8. 8Hz), 7. 50 -7. 41 (6H, m), 7. 36 (2H, d, J=8. 8Hz), 7. 18-7. 13 (2H, m), 6 .84 (1H, s), 4. 33 (1H, m), 2. 4 0-2. 15 (2H, m), 2. 15-1. 95 (2 H, m), 1. 95-1. 75 (2H, m), 1. 7 5-1. 55 (1H, m), 1. 55-1. 15 (3
Purity >90% (	1 101
MS 539 (M	+1)

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Table 60

Example No.	208	lH NMR(δ) ppm .
HO N CI	NO <sub>2</sub>	300MHz, DMSO-d6 8.32(1H, s), 8.27(1H, d, J=9 .0Hz), 8.07-8.00(3H, m), 7. 79-7.70(3H, m), 7.51(2H, d, J=8.1Hz), 7.40(2H, d, J=8.4 Hz), 7.18(2H, d, J=8.7Hz), 4.99(2H, s), 4.34(1H, m), 2.4 0-2.15(2H, m), 2.15-1.95(2 H, m), 1.95-1.75(2H, m), 1.7 5-1.55(1H, m), 1.55-1.15(3
Purity >90% (NMR)		Н, ш).
MS 582 (M+1)		·

209 IH NMR( $\delta$ ) ppm Example No. >90% (NMR) Purity MS 513 (M+1)

300MHz, DMSO-d6 300MHz, DMSO-d6
8. 24 (1H, d, J=4.4Hz), 7. 98a
nd7. 88 (2H, ABq, J=8.6Hz), 7
. 70and7. 19 (4H, A'B'q, J=8.4Hz), 7. 35 (1H, t, J=8.4Hz), 6. 86 (1H, d, J=8.1Hz), 6. 79 (1H, s), 6. 71 (1H, d, J=8.1Hz), 4. 65-4.53 (1H, m), 4. 31 (1H, brt, J=12.2Hz), 3. 88-3. 78 (2H, m), 3. 48 (2H, t, J=9.0Hz), 2. 39-2. 19 (2H, m), 1. 02-1. 71 (6H, m), 1. 70-1. 50 (3H, m), 1. 46-1. 19 (3H, m)

Example No. 210	1H NMR(δ) ppm
HO CF <sub>3</sub>	300MHz, DMSO-d6 12. 75 (1H, s), 8. 23 (1H, s), 7 . 96and7. 87 (2H, ABq, J=8. 7H z), 7. 84-7. 66 (6H, m), 7. 38 ( 1H, t, J=8. 4Hz), 7. 18 (2H, d, J=8. 4Hz), 6. 91 (1H, d, J=9. 0 Hz), 6. 84 (1H, s), 6. 74 (1H, d , J=8. 1Hz), 5. 26 (2H, s), 4. 3 1 (1H, brt, J=12. 2Hz), 2. 40- 2. 20 (2H, m), 1. 99-1. 76 (4H,
Purity >90% (NMR)	m), 1.69-1.58(1H,m), 1.45- 1.20(3H,m)
MS 587 (M+1)	

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Table 61

Example No.	211	1H NMR(δ) ppm
но	}~ ←	300MHz, DMSO-d6 8. 29(1H, s), 8. 15and7. 47(2 H, ABq, J=9. 0Hz), 7. 77and7. 24(4H, ABq, J=8. 9Hz), 7. 39(1H, t, J=7. 8Hz), 6. 84(1H, d, J=9. 3Hz), 6. 76(1H, s), 6. 75(1H, d, J=9. 5Hz), 4. 36(1H, b) rt, J=12. 2Hz), 3. 89(2H, d, J=6. 0Hz), 3. 42(2H, d, J=10. 8Hz), 3. 04-2. 88(2H, m), 2. 78
Purity >90% (N	IMR)	-2. 60 (1H, m), 2. 71 (2H, d, J= 4. 8Hz), 2. 38-2. 20 (2H, m), 2
MS 540 (M+	1)	.07-1.80(7H, m), 1.70-1.20

Example No. 21	2 IH NMR(δ) ppm
HO! CT SO	300MHz, DMSO-d6 8. 22(1H, s), 7. 93and7. 87(2 H, ABq, J=8. 6Hz), 7. 68and7. 17(4H, A'B'q, J=8. 7Hz), 7. 4 3-7. 33(5H, m), 6. 87(1H, d, J=8. 1Hz), 7. 18(2H, d, J=8. 4Hz), 6. 91(1H, d, J=9. 0Hz), 6. 81(1H, s), 6. 72(1H, d, J=8. 0 Hz), 5. 08(2H, s), 4. 36(1H, b rt, J=12. 2Hz), 2. 37-2. 20(2
Purity >90% (NMR)	H, m), 1. 98-1. 78 (4H, m), 1. 6 9-1. 60 (1H, m), 1. 41-1. 21 (3
MS 575 (M+1)	H, m), 1. 28 (9H, s)

Example N	0.	213	1H NMR(δ) ppm
HO TY		)-o'	300MHz, DMSO-d6 8. 23 (1H, s), 7. 95and7. 86 (2 H, ABq, J=8. 4Hz), 7. 69and7. 19 (4H, A'B'q, J=8. 7Hz), 7. 6 2-7. 36 (5H, m), 6. 90 (1H, d, J =8. 1Hz), 6. 84 (1H, s), 6. 76 ( 1H, d, J=8. 1Hz), 5. 19 (2H, s) , 4. 31 (1H, brt, J=12. 2Hz), 2 . 40-2. 19 (2H, m), 1. 99-1. 76 (4H, m), 1. 68-1. 55 (1H, m), 1
Purity	>90% (NM	R)	. 50-1. 18 (3H, m)
MS	553 (M+1)	<del></del>	

Table 62

Example No.	214	1H NMR(δ) ppm
HO N		300MHz, DMSO-d6 8. 94 (1H, d, J=2. 1Hz), 8. 60 ( 1H, dd, J=4. 8, 1. 5Hz), 8. 23 ( 1H, d, J=1. 5Hz), 8. 12 (1H, dt , J=8. 1, 2. 1Hz), 7. 93 (1H, d, J=8. 7Hz), 7. 87 (1H, dd, J=8. 7 1. 5Hz), 7. 70 (1H, d, J=8. 7Hz), 7. 67-7. 54 (3H, m), 7. 50 (1H, dd, J=8. 1, 4. 8Hz), 7. 25 (2H, d, J=8. 7Hz), 7. 21 (1H, m)
Purity >90% (	NMR)	), 4. 31 (1H, m), 2. 38-2. 19 (2 H, m), 2. 00-1. 78 (4H, m), 1. 6
MS 490 (M	+1)	5 (1H, m), 1. 48-1. 22 (3H, m).

Example No. 215	1H NMR(δ) ppm
HO TN O	300MHz, DMSO-d6 12. 75 (1H, brs), 8. 23 (1H, s) , 7. 95 (1H, d, J=8. 7Hz), 7. 86 (1H, d, J=8. 7Hz), 7. 73 (2H, d , J=8. 4Hz), 7. 71 (2H, d, J=8. 4Hz), 7. 63-7. 39 (2H, m), 7. 5 2 (2H, d, J=8. 4Hz), 7. 24 (2H, d, J=8. 4Hz), 7. 18 (1H, m), 4. 31 (1H, m), 2. 39-2. 20 (2H, m) , 2. 00-1. 76 (4H, m), 1. 65 (1H
Purity >90% (NMR)	, m), 1.49-1.18(3H, m).
MS 523 (M+1)	

Example No. 216	1H NMR(δ) ppm
HO NO O	300MHz, DMSO-d6 12. 77 (1H, s), 8. 23 (1H, d, J= 1. 4Hz), 7. 95 (1H, d, J=8. 6Hz ), 7. 86 (1H, dd, J=8. 6, 1. 4Hz ), 7. 70 (2H, d, J=8. 7Hz), 7. 6 4 (2H, d, J=8. 8Hz), 7. 56-7. 4 8 (2H, m), 7. 40 (1H, s), 7. 23 ( 2H, d, J=8. 7Hz), 7. 10 (1H, m) , 7. 03 (2H, d, J=8. 8Hz), 4. 31 (1H, m), 3. 80 (3H, s), 2. 48-2
Purity >90% (NMR)	] . 20 (2H, m), 2. 00-1. 88 (4H, m   ), 1. 66 (1H, m), 1. 50-1. 21 (3
MS 519(M+1)	H, m).

. Table 63

Example	No.	217	IH NMR(δ) ppm
но			(DMSO-d6) δ:12.80(1H, brs), 8.23(1H, s), 8.04(1H, d, J)=8.6Hz), 7.96(3H, d, J=8.6Hz), 7.86(1H, d, J=8.7Hz), 7.63(2H, d, J=8.6Hz), 7.25(2H, d, J=8.6Hz), 5.50(2H, s), 4.36-4.21(1H, m), 3.27(3H, s), 2.74(3H, s), 2.40-2.19(2H, m), 1.99-1.79(4H, m), 1.71-1.60(1H, m), 1.49-1.19(3
Purity	>90% (NMR)		Н, ш)
MS	602 (M+1)		

Example No	).	218	1H NMR(δ) ppm
НО	CI CI	Z=	300MHz, DMSO-d6 12.9(1H, brs), 8.25(1H, s), 8.04(1H, d, J=8.7Hz), 7.91( 1H, d, J=8.6Hz), 7.72(2H, d, J=8.5Hz), 7.67(2H, d, J=8.7 Hz), 7.56(2H, d, J=8.5Hz), 7 .26(2H, d, J=8.7Hz), 5.45(2 H, s), 4.31(1H, m), 2.71(3H, s), 2.40-2.15(2H, m), 2.05- 1.80(4H, m), 1.75-1.55(1H,
Purity >	90% (NMR	)	m), 1.55-1.15(3H, m).
MS	558 (M+1)		

Example No.	219	1H NMR(δ) ppm
HO N O	CI	300MHz, DMSO-d6 8. 21 (1H, d, J=1. 5Hz), 7. 93 ( 1H, d, J=9. 0Hz), 7. 84 (1H, dd , J=9. 0, 1. 5Hz), 7. 56 (2H, d, J=8. 7Hz), 7. 42-7. 30 (4H, m) , 7. 12 (2H, d, J=8. 7Hz), 4. 53 (1H, brs), 4. 36-4. 20 (1H, m) , 3. 55 (2H, brs), 3. 00-2. 90 ( 1H, m), 2. 70-2. 58 (1H, m), 2. 40-1. 10 (18H, m)
Purity >90% (NM	AR)	·
MS 544 (M+1)		

Table 64

Example No.	220	lH NMR(δ) ppm
HO N O	S	300MHz, DMSO-d6 12. 76(1H, s), 8. 23(1H, s), 7 . 96and7. 87(2H, ABq, J=8. 9H z), 7. 69and7. 19(4H, A'B'q, J=8. 6Hz), 7. 55(1H, s), 7. 37 (1H, t, J=8. 1Hz), 6. 91(1H, d , J=7. 8Hz), 6. 85(1H, s), 6. 7 4(1H, d, J=7. 5Hz), 5. 13(2H, s), 4. 31(1H, brt, J=12. 2Hz) , 2. 65(3H, s), 2. 41-2. 20(2H
Purity >90% (NMR	)	, m), 2.00-1.74(4H, m), 1.70 -1.59(1H, m), 1.58-1.20(3H
MS 540 (M+1)		, m)

Example No. 22	1 1H NMR(δ) ppm
HO NO S	300MHz, DMSO-d6 8. 23(1H, s), 7. 96and7. 86(2 H, ABq, J=8. 6Hz), 7. 69and7. 18(4H, A'B'q, J=8. 7Hz), 7. 3 7(1H, t, J=8. 2Hz), 6. 87(1H, d, J=8. 2Hz), 6. 82(1H, s), 6. 75(1H, d, J=8. 0Hz), 5. 24(2H , s), 4. 32(1H, brt, J=12. 2Hz ), 2. 58(3H, s), 2. 38-2. 20(2 H, m), 2. 30(3H, s), 2. 00-1. 7
Purity >90% (NMR)	9(4H, m), 1. 70-1.59(1H, m), 1.44-1.20(3H, m)
MS 554 (M+1)	

Example No.	222	1H NMR(δ) ppm
HO IN	O CI	300MHz, DMSO-d6 12.88(1H, brs), 8.25(s, 1H), 8.07-7.57(11H, m), 7.26(2 H, d, J=8.7Hz), 7.24(1H, m), 4.34(1H, m), 2.30-2.20(2H, m), 2.03-1.78(4H, m), 1.64(1H, m), 1.49-1.19(3H, m).
Purity >90%	(NMR)	
MS 557	(M+1)	

Table 65

Example No.	223	IH NMR(δ) ppm
HO NO	<b>(</b> }−cı	300MHz, DMSO-d6 10.96(1H, brs), 8.21(1H, d, J=1.4Hz), 7.93(1H, d, J=8.7 Hz), 7.84(1H, dd, J=8.7, 1.4 Hz), 7.76-7.40(7H, m), 7.18 (2H, d, J=8.0Hz), 4.24-4.16 (2H, m), 2.40-1.12(18H, m)
Purity >90% (NMI	₹)	
MS 544 (M+1)		

	<del></del>
Example No. 224	1H NMR(δ) ppm
HO N CI	(DMSO-d6) δ:8.22(1H, s), 8 .07(1H, d, J=8.4Hz), 7.92(1 H, d, J=8.4Hz), 7.54(2H, d, J =8.7Hz), 7.40(2H, d, J=8.4Hz), 7. 14(2H, d, J=8.7Hz), 4.61(2H ,s), 4.48-4.32(1H, m), 3.82 (1H, brd, J=12.3Hz), 3.65-3 .47(2H, m), 3.10(brdd, J=8. 4, 12.3Hz), 2.40-2.20(2H, m
Purity >90% (NMR)	), 2.09-1.76(6H, m), 1.71-1 .16(6H, m)
MS 544 (M+1)	

		<u>·</u>
Example No.	225	1H NMR(δ) ppm .
HO N O	NH <sub>2</sub>	(DMSO-d6) δ:12.83(1H, brs), 8.21(1H, s), 8.10(1H, brs), 7.01-7.91(2H, m), 7.89-7.82(2H, m), 7.75(1H, d, J=8.0Hz), 7.59(2H, d, J=8.7Hz), 7.53(4H, s), 7.46(1H, brs), 7.12(2H, d, J=8.7Hz), 7.23(2H, s), 4.35-4.17(1H, m), 2.38-2.20(2H, m), 1.99-1.79(4H, m), 1.71-1.59(1H, m), 1.
Purity >90% (NMR)		48-1. 18 (3H, m)
MS 580 (M+1) ·		

Table 66

Example No. 226	1H NMR(δ) ppm
HO CIN CO	300MHz, DMSO-d6 8. 33and8. 08 (2H, ABq, J=8. 7 Hz), 8. 31 (1H, m), 7. 66and7. 26 (4H, A'B'q, J=9. 2Hz), 7. 4 2and7. 39 (4H, A"B"q, J=8. 7H z), 4. 57 (2H, s), 4. 50 (1H, br t, J=12. 2Hz), 3. 85-3. 62 (3H , m), 3. 28-3. 16 (2H, m), 2. 42 -2. 23 (2H, m), 2. 14-1. 81 (6H , m), 1. 72-1. 25 (6H, m)
Purity >90% (NMR)	
MS 544 (M+1)	

Example No.

227

1H NMR(δ) ppm

300MHz, DMSO-d6

8. 43(1H, d, J=5. 0Hz), 8. 23(
1H, s), 7. 96and7. 86(2H, ABq,
J=8. 6Hz), 7. 69and7. 18(4H,
A'B'q, J=8. 6Hz), 7. 57(1H,
s), 7. 47(1H, d, J=5. 0Hz), 7.
40(2H, t, J=8. 2Hz), 6. 91(1H,
d, J=8. 3Hz), 6. 85(1H, s), 6.
77(1H, d, J=7. 9Hz), 5. 25(2

H, s), 4. 31(1H, brt, J=12. 2H
z), 2. 40-2. 19(2H, m), 1. 991. 75(4H, m), 1. 73-1. 57(1H,
m), 1. 49-1. 19(3H, m)

Example No. 228	1H NMR(δ) ppm
HO N O N	300MHz, DMSO-d6 12.80(1H, brs), 8.22(1H, s) ,7.94(1H, d, J=8.6Hz), 7.87 (1H, d, J=8.6Hz), 7.60(2H, d ,J=8.7Hz), 7.32(2H, d, J=8.7Hz), 6 .70(2H, d, J=8.7Hz), 4.35-3 .97(4H, m), 3.62-3.11(2H, m ), 2.96(6H, s), 2.39-1.12(1 4H, m)
Purity >90% (NMR)	
MS 567 (M+1)	

Table 67

Example No.	229	1H NMR(δ) ppm
CI,	, -0_	300MHz, DMSO-d6 8. 25(1H, s), 8. 20(1H, s), 8. 04(1H, dd, J=8. 1, 1. 8Hz), 7. 92(1H, d, J=8. 1Hz), 7. 84(1H, d, J=9. 9Hz), 7. 62-7. 50(7H, m), 7. 12(2H, d, J=8. 7Hz), 5. 14(2H, s), 4. 36(2H, q, J=6. 9Hz), 4. 30-4. 20(1H, m), 2. 3. 8-2. 18(2H, m), 1. 98-1. 18(8. H, m), 1. 35(3H, t, J=6. 9Hz)
Purity >90% (NMR)		
MS 608 (M+1)		

Example No.	230	1H NMR(δ) ppm
HO N O	CF <sub>3</sub>	300MHz, DMSO-d6 8. 35 (1H, s), 8. 27 (1H, d, J=8 . 7Hz), 8. 05 (1H, d, J=9. 0Hz) , 7. 87 (2H, d, J=8. 7Hz), 7. 74 (1H, t, J=8. 1Hz), 7. 64 (1H, d , J=7. 8Hz), 7. 59-7. 50 (2H, m ), 7. 36 (2H, d, J=8. 7Hz), 4. 3 9 (1H, m), 2. 40-2. 15 (2H, m), 2. 15-1. 95 (2H, m), 1. 95-1. 7 5 (2H, m), 1. 75-1. 55 (1H, m),
Purity about 90%(NM	IR)	1.55-1.20 (3H, m).
MS 481 (M+1)		1

Example No.	231	1H NMR(δ) ppm
HO N	h- N S	300MHz DMSO-d6 12. 78 (1H, brs), 8. 23 (1H, d, J=1. 5Hz), 7. 96 (1H, d, J=8. 7 Hz), 7. 87 (1H, dd, J=8. 7, 1. 5 Hz), 7. 75 (2H, d, J=8. 4Hz), 7. 63 (2H, d, J=8. 4Hz), 7. 52 (2 H, d, J=8. 4Hz), 7. 24 (2H, d, J=8. 4Hz), 5. 47 (2H, s), 4. 29 (1H, m), 2. 97 (6H, brs), 2. 72 (3H, s), 2. 39-2. 16 (2H, m), 2.
Purity about 90%	NMR)	00-1: 78 (4H, m), 1. 71-1. 59 ( 1H, m), 1. 49-1. 17 (3H, m)
MS 595 (M	(+1)	]

Table 68

Example No.	232	IH NMR(δ) ppm
HO N O	→ Ň	300MHz, DMSO-d6 12.8(1H, brs), 8.22(1H, s), 7.96(1H, d, J=8.7Hz), 7.86( 1H, d, J=8.6Hz), 7.70(1H, s), 7.59(2H, d, J=8.7Hz), 7.53 -7.50(5H, m), 7.42(1H, d, J= 7.9Hz), 7.12(2H, d, J=8.7Hz), 5.11(2H, s), 4.27(1H, m), 3.01(3H, brs), 2.97(3H, brs), 2.40-2.15(2H, m), 2.00-1
Purity >90% (NMR)		.75(4H, m), 1.75-1.55(1H, m), 1.50-1.15(3H, m).
MS 608 (M+1)		

Example No.	233	1H NMR(δ) ppm
HCI CI	>  -N  -N	DMSO-d6 13. 20 (1H, brs), 8. 99 (1H, s), 8. 32 (1H, s), 8. 25 (1H, d, J=8. 8Hz), 8. 04 (1H, d, J=8. 6Hz), 7. 79-7. 74 (4H, m), 7. 60 (2H, d, J=8. 7Hz), 5. 26 (2H, s), 4. 36 (1H, m), 2. 72 (3H, s), 2. 50-2. 15 (2H, m), 2. 15-1. 95 (2H, m), 1. 95-1. 75 (2H, m), 1. 75-1.
Purity >90% (NM	R) ·	55 (1H, m), 1.55-1.15 (3H, m)
MS 553 (M+1-HC1)	)	

Example No. 2	34 1H NMR(δ) ppm
HO N O N	DMSO-d6 8. 77 (1H, d, J=3. 6Hz), 8. 36- 8. 26 (3H, m), 8. 08 (1H, d, J=8 .8Hz), 7. 79 (2H, d, J=8. 7Hz) , 7. 72-7. 64 (3H, m), 7. 58 (2H , d, J=8. 4Hz), 7. 30 (2H, d, J= 8. 7Hz), 5. 26 (2H, s), 4. 38 (1 H, m), 2. 50-2. 15 (2H, m), 2. 1 5-1. 95 (2H, m), 1. 95-1. 75 (2 H, m), 1. 75-1. 55 (1H, m), 1. 5
Purity >90% (NMR)	5-1. 15 (3H, m).
MS 538 (M+1-2HC1)	

Table 69

Example No.	235	1H NMR(δ) ppm
HO N O	<u> </u>	300MHz, DMSO-d6 12. 74(1H, brs), 8. 67(1H, dd, J=3. 1, 1. 6Hz), 8. 21(1H, d, J=1. 6Hz), 7. 93(1H, dJ=8. 6Hz), 7. 90-7. 80(2H, m), 7. 60-7. 50(7H, m), 7. 09(2H, d, J=8. 7Hz), 5. 16(2H, s), 4. 26(1H, m), 2. 40-2. 20(2H, m), 2. 00-1. 60(5H, m), 1. 50-1. 20(3H, m), 2.
Purity >90% (NMR	)	
MS APCI-Ms 538 (M+1	)	

	· · · · · · · · · · · · · · · · · · ·	<del></del>
Example No.	236	1H NMR(δ) ppm
HO N N N	CI CF₃CO₂H	300MHz, DMSO-d6 8. 40-7. 40(11H, m), 2. 95, 2. 81(3H, each d, J=4. 7Hz), 2. 40-2. 20(2H, m), 2. 10-1. 80(4H, m), 1. 70- 1. 60(1H, m), 1. 50-1. 20(3H, m)
Purity >90% (NMR	.)	
MS APCI-Ms 555 (M+)	)	

Example No.	237	1H NMR(δ) ppm
HO TN O	Z=Z	300MHz, DMSO-d6 8. 21 (1H, s), 8. 15 (1H, d, J=9 . 5Hz), 8. 02 (1H, s), 8. 00-7. 80 (3H, m), 7. 70-7. 50 (6H, m) . 7. 12 (2H, d, J=8. 7Hz), 5. 16 (2H, s), 4. 28 (1H, m), 2. 40-2 . 20 (2H, m), 2. 00-1. 80 (4H, m ), 1. 65 (1H, m), 1. 50-1. 20 (3 H, m)
Purity >90% (NMR	2)	·
MS FAB-Ms 605 (M+1	)	

Table 70

. `

Example No. 238	1H NMR(δ) ppm
HCI NO	300MHz, DMSO-d6 12.80(1H, brs), 8.54(1H, s), 8.25(1H, s), 7.98and7.88(2H, Abq, J=8.6Hz), 7.76(2H, d, J=8.6Hz), 7.53-7.31(3H, m), 6.61(1H, s), 5.46(2H, s), 4.32(1H, brt), 2.40-2.20(2H, m), 2.02-1.79(4H, m), 1.69-1.59(1H, m), 1.48-1.19(3H, m)
Purity >90% (NMR)	
MS APCI-Ms 521 (M+1)	

Example No. 239	1H NMR(δ) ppm
HO TN ON	300MHz, DMSO-d6 12. 79(1H, brs), 8. 60(2H, d, J=1. 5Hz), 8. 53(1H, s), 8. 25(1H, s), 7. 98and7. 85(2H, AB q, J=9. 4Hz), 7. 76(2H, d, J=9. 0Hz), 7. 44(4H, d, J=6. 5Hz), 6. 69(1H, s), 5. 53(2H, s), 4. 32(1H, brt), 2. 40-2. 19(2H, m), 2. 03-1. 82(4H, m), 1. 72-1. 61(1H, m),
Purity >90% (NMR)	1. 42-1. 22 (3H, m)
MS APCI-Ms 522(M+1)	

Example No.	240	1H NMR(δ) ppm
HO NO NO	N CI	300MHz, DMSO-d6 8.90(1H, s), 8.32(1H, s), 8. 28(1H, s), 8.25(1H, d, J=8.3 Hz), 8.05(1H, d, J=8.8Hz), 7. .96(1H, s), 7.93(1H, d, J=8.4 Hz), 7.68-7.59(2H, m), 7.54 (2H, d, J=8.8Hz), 4.37(1H, b rt), 2.30(2H, m), 2.00(2H, m), 1.88(2H, m), 1.67(1H, m),
Purity >90% (N	MR)	1.5-1.2(3H, m)
MS APCI-Ms 525	(M+1)	

		Table 71	•
5	Ex. No.	Formula	MS
	1001	O II	364 (M+H)
10		H <sub>2</sub> N O H <sub>3</sub> C	
15	1002	H <sub>2</sub> N COH,	454 (M+H)
20	1003		
25	1003	H <sub>2</sub> N C	398 (M+H)
30	1004		357 (M+H)
35 ·		H <sub>1</sub> N N	
40	1005	12N OH	322 (M+H)
45			
50	1006	NO <sub>2</sub>	85 (M+H)
55			

Т	ah	م (	. 7	2
	au			•

		Table 12	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
	Ex. No.	Formula	MS
5	1007	. 6	357 (M+H)
		n	
		H,N N	
	1		1
10			
	•		]
15	1008		416 (M+H)
			i
		H,N Y N	1
		N N CH	
20	]	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	
	1009	O.	310 (M+H)
		N N	
25		H <sub>2</sub> N	· .
		N )	
	j	H <sub>3</sub> ¢	
30		ı .	· .]
	1010	0	390 (M+H)
		H,N OF	
35		N F	·
		F	
	1011	O NO <sub>2</sub>	395 (M+H)
40			٠.
		H'N CO	1
		V V	
45			
			·
ļ	1012	Q	366 (M+H)
		H <sup>2</sup> N N	
50		· · · · · · · · · · · · · · · · · · ·	
	·	N S	
ĺ		ОН	
		$\bigvee$	
55	<u> </u>		·

		Table 73	
	Ex. No.	Formula	MS
5	1013	F F . ·	374 (M+H)
10		H <sub>2</sub> N F	
15	1014	H,N N	382 (M+H)
20			
25	1015	H'N OH	350 (M+H)
30	1016		
35		H <sub>2</sub> N Br	402 (M+H)
40	1017	H,N \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	414 (M+H)
<b>45</b> .		N CH <sub>3</sub>	
50	1018	H <sub>2</sub> N CI	340 (M+H)
55			

			Table 74	٠٠.
		Ex. No.	. Formula	. MS
5		1019	н,с	350 (M+H)
10			H <sub>2</sub> N D	
15		1020	9 -	380 (M+H)
20			H <sub>2</sub> N OH	
25		1021	ОН	366 (M+H)
30			H <sub>2</sub> N C	
35		1022	0	378 (M+H)
40			H <sub>2</sub> N CH <sub>3</sub>	
45	. ]			100 (101 - 11)
50 55		1023	H <sub>2</sub> N Br	402 (M+H)
55	Ļ			

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		Table 75	<i>:</i>
5	Ex. No.	Formula	MS
5	1024		518 (M+H)
10		H <sub>2</sub> N N	
15			
20	1025	H <sub>2</sub> N CI	408 (M+H)
25	1026	CH,	336 (M+H)
30		н, м — ОН	
35	1027	H²N T N	408 (M+H)
40	1028	9 У-он	366 (M+H)
45		-1-и — — — — — — — — — — — — — — — — — — —	
50	1029 H	LIN CH 3	62 (M+H)
55		н,с с	

ab		76

	<u> </u>	Table 10	
_	Ex. No.	Formula	MS
5	1030		473 (M+H)
		H <sub>2</sub> N N	
10			
•	1031	Ω ,oH	338 (M+H)
15		HN /	
		OH	
20 .			
20 .	1032	,	307 (M+H)
		H <sub>2</sub> N N	
25			
	1033		406 (M+H)
30		i a N a	
		H'N C	
. 35	·	<u>`</u>	
			466 (24) 11)
2	1034		466 (M+H)
40		H <sub>2</sub> N F F	
ļ	·	F	
45			
	1035		412 (M+H)
	• .	ي کے	
50		H <sub>2</sub> N N	
E E	<i>;</i>		
55			

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		Table 77	
_	Ex. No.	Formula	MS
5	1036	СН <sub>3</sub>	412 (M+H)
10		H <sub>2</sub> N T	
15	1037	H,N CH,	428 (M+H)
20	1038		
25	1030	H <sub>2</sub> N C	466 (M+H)
30	1039		406 (M+H)
35		H <sub>2</sub> N CI	
40	1040	-LN NO2	417 (M+H)
45	1041		
50		H <sub>2</sub> N F F	440 (M+H)
55			

Tab	78

	Ex. No.	Formula	MS
	Ex. 140.	roimula	1
5	1042	NO <sub>2</sub>	417 (M+H)
		H <sub>2</sub> N N	
	ł		·
10		N V	·
	1.		
	İ		]
	1043	F F	440 (M+H)
45	1045	, F <del>/ F</del>	110 (11.11)
15			•
	1		
	·	H <sub>2</sub> N N O	
	i .*		
20		<b>\</b>	[
			į
	1044	O <sub>I</sub>	312 (M+H)
25 .		H,N N	
		· · · · · · · · · · · · · · · · · · ·	
	j ,		
:	1.	$\rightarrow$	
30 .	•		
	1045	^	423 (M+H)
	1		
35 .		H <sub>2</sub> N N	
:	·		·
	ļ	H <sub>3</sub> C	٠
	]		
40			
	1046	OH OH	352 (M+H)
		H <sub>2</sub> N	
•			ļ
45 .		N CH,	Ī
	]		
	1047	9	307 (M+H)
	7007	H ~ \\	
50		H <sub>2</sub> N \	
			ľ
55			l
	·	· · · · · · · · · · · · · · · · · · ·	

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			Table 79	
5		Ex. No.	Formula	MS
		1048	P F F	374 (M+H)
10	-		HAN TIN	
45		1049		·
15		1043	H <sub>L</sub> N O	398 (M+H)
20	•			
25		1050	H <sub>2</sub> N S CH <sub>3</sub>	326 (M+H)
30				
35		1051		442 (M+H)
40			н, м	
45		1052	·	518 (M+H)
50			-tw	
55				

ab		C

		Table 80	·
	Ex. No.	Formula	MS
5 .	1053		442 (M+H)
		<b>&gt;=</b> /	
10		H <sub>2</sub> N N	
	·	CH,	.
15	1054		376 (M+H)
	1034	N =	370 (M+H)
•		H <sub>2</sub> N OH	. [
20			
25	1055	i	442 (M+H)
23	·	H <sub>2</sub> N T	
	·		
30 .		, н <sub>у</sub> с	
	1056	or o	352 (M+H)
•		H²N OH	
35			
	1057	9	367 (M+H)
**		H <sub>2</sub> N OH	
		N On	
45		NO <sub>2</sub>	·
	1058	0 NO	367 (M+H)
		, , , , , , , , , , , , , , , , , , ,	
50		н, м — Он	
55			
l			·

	•		Table 81	
5		Ex. No.	Formula	MS
3		1059	O II	364 (M+H)
			H,N N	
10				
			СН,	
		1060		
15				324 (M+H)
			H <sub>2</sub> N \	
			N N	
20		•	∫ F	
	f	1061	0	352 (M+H)
		·	H <sub>2</sub> N /	
25	1		ОН	
30	. [	1062	, ңс́	
		1062	N S NO <sub>2</sub>	357 (M+H)
	.		H <sub>2</sub> N S NO <sub>2</sub>	
35	• [			
	<u> </u>	1063	0	260 (26.77)
40	•			360 (M+H)
			H <sub>2</sub> N F	
		-		
45				
		1064	O.	351 (M+H)
50		. 1	H <sub>2</sub> N N	
			NO <sub>2</sub>	
55				. •
	L			. 1

		Table 82	1
	Ex. No.	Formula	MS
5	1065	H <sub>2</sub> N /	351 (M+H)
. 10		NO <sub>2</sub>	
15	1066	H <sub>2</sub> N N O	366 (M+H)
20		н,с сн,	
25	1067	H <sub>2</sub> N NO <sub>2</sub>	367 (M+H)
30	1068	ОН	364 (M+H)
35		H <sub>2</sub> N CH <sub>3</sub>	
40	1069	H <sub>I</sub> N N	350 (M+H)
45		ОН	
50	1070	H <sub>2</sub> N N	306 (M+H)

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_	aυ	7	Ç	0	Ç	

			Table 83	
		Ex. No.	Formula	MS
5		1071	0	365 (M+H)
10	K		HO H <sub>3</sub> C	
15		1072	HO H <sub>3</sub> C CH <sub>3</sub>	455 (M+H)
20	,			
25		1073	HO TY	399 (M+H)
30		1074		·
35			HO L N	358 (M+H)
40		1075		337 (M+H)
45			CH <sub>3</sub>	
50		1076	NO <sub>2</sub>	386 (M+H)
55				

Table 84

		Table 94	100
	Ex. No.	Formula	MS
5	1077		358 (M+H)
•	ľ		
		HO	·
10			
•	]		
	1078		417 (M+H)
15 .			
		но	
		N CH,	
20		, t,c	
		$\sim$	
	. 1079		311 (M+H)
25		но	• • •
•		N NH	
		<b>∕</b> <sup>kc</sup>	
		$\vee$	·
30	1080	Ŷ	391 (M+H)
	·	HO N F	
		V <sub>F</sub>	
35		<i>→</i>	.
		$\sim$	·
	1081	no <sub>2</sub> ,	396 (M+H)
40		HO N	
	·		
	·	) `o'	·
45		$\bigvee$	.
40	1082	. 0	367 (M+H)
		HO 1 1	
50		OH	. [
		()	
			•

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		Table 85	
_	Ex. No.	Formula	MS
5	1083	9 F	375 (M+H)
10	·	HO F	
	1004		
15	1084	OH OH	351 (M+H)
20		HO'TING	
25	1085	HO N	383 (M+H)
30	1096		
35	1086	HO N Br	403 (M+H)
40	1087	но	415 (M+H)
45		Br CH,	
50	1088	HO CI	341 (M+H)
55		$\Diamond$	· ·

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Table 86

		Table 86	
5	Ex. No.	Formula	MS
	1089	- ң,с	351 (M+H)
10		HO N	
15			
20	1090	HO NO OH	381 (M+H)
25	1091	рн	367 (M+H)
30		HO TO	
35	2000		270 (44.11)
40	1092	но	379 (M+H)
45	1093	HO Br	403 (M+H)
50			

193

		Table 87	
	Ex. No.	Formula	· MS
5	1094		519 (M+H)
10		HOLL	·
15 .			
20	1095	HO C F F	409 (M+H)
25	1096	g F	337 (M+H)
30		HO CH,	
35	1097	HO TO	409 (M+H)
40	1098		367 (M+H)
45		но	
50	1099	но	363 (M+H)
55		H <sub>2</sub> C H <sub>3</sub> C	

Table 88

		Table 88	•
•	Ex. No.	Formula	MS
5	1100		474 (M+H)
10		HO NO	
•	1101	Он	339 (M+H)
15		но	
20			
0.5	1102	HO N	308 (M+H)
25			
	1102		467 (24.11)
	1103	HO FFF	467 (M+H)
35 			
40 :	1104	HO N	413 (M+H)
45			
ſ	1105	g o—()—a4,	413 (M+H)
50	·	HO N	
55	·		

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		Table 89	
	Ex. No.	Formula	MS
5	1106	9 0	429 (M+H)
10		HO CH,	
15	1107	HO N C C	467 (M+H)
20			
25	1108	HO CONTRACTOR CONTRACT	
30	1109	9	·
35		HO NO <sub>2</sub>	
40	1110	HO F F	441 (M+H)
45			
50 55	1111	HO NO2	118 (M+H)

Table 90

		Table 30	
	Ex. No.	Formula	MS
5	1112		313 (M+H)
		0	313 (11.
		HO	
10			
·	1113	0	308 (M+H)
15	1	HO \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	
		N N	
20			
	1114	₽ F F	375 (M+H)
		F-C	. :
		но	
25			
	·	( ]	
	1115		200 04: **
30	1115		399 (M+H)
:			
		HO T	
		N =	.
35	1		
	1116	Ŷ	327 (M+H)
	1.	HO S CH <sub>3</sub>	
40	<b> </b> -		
		$\nearrow$	
45	1117		443 (M+H)
	'		ľ
		<b>&gt;</b>	
		ρ	
50	· . [	HO N	
	]		
	]	~ " =	
55	L		

		Table 91	
5	Ex. No.	Formula	MS
	1118		519 (M+H)
10			
70		HO	٠.
15			
	1119		
20			443 (M+H)
		но	
25		CH <sub>3</sub>	
30	. 1120	0	377 (M+H)
		HO N OH	
35			
	1121	0 ,0-сн,	143 (M+H)
40		HO	·
•			
			· .
45	1122	CH <sub>3</sub>	53 (M+H)
		HO N >	
50		ОН	.
55	·	V	
		•	

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10	ப	. =	7 L

		Table 92	
	Ex. No.	Formula	MS -
5	1123	NO <sub>2</sub>	368 (M+H)
		но	
10			·
15	1124	NO <sub>2</sub>	368 (M+H)
	·	HO	
20		ОН	
	1125		365 (M+H)
	1125	N =	363 (M+H)
25		HO NO	
		сн,	
30	1126	0	325 (M+H)
		но	
35			
40 .	1127	0 	353 (M+H)
		но	
	·	0-сң	
45			
	1128	0	358 (M+H)
50		HO	·
	·	N S NO <sub>2</sub>	
55 .			
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	•		Table 93	
-		Ex. No.	Formula	MS
5		1129	HO N F F	361 (M+H)
10			F	
		!		
15		1130	но	352 (M+H)
			NO <sub>2</sub>	
20				
25		1131	HO N	352 (M+H)
30		1132	NO <sub>2</sub>	
35			HO CH <sub>3</sub>	367 (м+н)
40	-	1133	HO H <sub>3</sub> C'	368 (M+H)
<b>4</b> 5		·	ОН	
50		1134	IO CH <sub>3</sub>	365 (M+H)
55			н,с	

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5 1135 Pormula MS  1136 Pormula MS  1137 Pormula MS  1138 Pormula MS  351 (M+H)  20 1138 Pormula MS  365 (M+H)  370 Pormula MS		Table 94	· · ·	
1136  1136  1137  1138  1139  1139  1140		Ex. No.		MS
1136 HO N 307 (M+H)  15 HO N 385 (M+H)  20 1137 HO N S S CH <sub>3</sub> 30 1138 HO N S S CH <sub>3</sub> 31 1139 HO N S S CH <sub>3</sub> 32 1139 HO N S S S S S S S S S S S S S S S S S S	5	1135	Q	351 (M+H)
1136 OH 307 (M+H)  20 1137 OH 385 (M+H)  25 OH 385 (M+H)  30 1138 OH 365 (M+H)  31  OH 385 (M+H)  32 OH 385 (M+H)  33 OH 385 (M+H)  34 OH 385 (M+H)  40 OH 385 (M+H)			HO N P	
1136				
1137 HO N 385 (M+H)  25  1138 O O S S CH,  365 (M+H)  40  45  1140 HO N O CH,  387 (M+H)  50	10 .		<b>1</b>	· .
1137 HO N 385 (M+H)  25  1138 O O S S CH,  365 (M+H)  40  45  1140 HO N O CH,  387 (M+H)  50				
20 1137 HO		1136	Ŷ	307 (M+H)
25  HO  HO  N  385 (M+H)  30  3138  HO  N  O  O  A67 (M+H)  40  HO  N  O  CH  A67 (M+H)  A67  A67  A67  A67  A67  A67  A67  A6	15		HO N	
25  HO  HO  N  385 (M+H)  30  3138  HO  N  O  O  A67 (M+H)  40  HO  N  O  CH  A67 (M+H)  A67  A67  A67  A67  A67  A67  A67  A6				
25  HO  HO  N  385 (M+H)  30  3138  HO  N  O  O  A67 (M+H)  40  HO  N  O  CH  A67 (M+H)  A67  A67  A67  A67  A67  A67  A67  A6				
25  30  1138  0  365 (M+H)  40  40  40  40  1140  HO  N  O  O  O  O  O  O  O  O  O  O  O  O	20	·		
25 30 1138 HO		1137	1 . 11	385 (M+H)
35 1138 0 365 (M+H)  36 1139 CI 467 (M+H)  40 HO CI 387 (M+H)  50 CH <sub>3</sub> 387 (M+H)				
35  1139  HO  N  CI  467 (M+H)  45  1140  HO  N  CH <sub>3</sub> 387 (M+H)	25			
35  1139  HO  N  CI  467 (M+H)  45  1140  HO  N  CH <sub>3</sub> 387 (M+H)				]
35  1139  HO  N  CI  467 (M+H)  45  1140  HO  N  CH <sub>3</sub> 387 (M+H)		1138		365 (M+H)
1139 CI 467 (M+H)  40  45  1140  HO  N  CH  387 (M+H)	30			
1139 CI 467 (M+H)  45  1140 O O O O O O O O O O O O O O O O O O O				
1139 CI 467 (M+H)  45  1140 O O O O O O O O O O O O O O O O O O O				
45  1140  HO  CI  387 (M+H)	35			
45 1140 HO CI 387 (M+H) 50		1139	, <sup>CI</sup>	467 (M+H)
45 1140 HO CI 387 (M+H) 50				,
1140 HO CH <sub>3</sub> 387 (M+H)	40		HO N	
1140 HO CH <sub>3</sub> 387 (M+H)		·	The calculation of the calculati	
1140 HO CH <sub>3</sub> 387 (M+H)		0		
50 HO CH <sub>3</sub>				
50		1140		387 (M+H)
	50		HO CH.	
55				
55		· · ·	$\rightarrow$	
	55			·

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1 7 ( )	 9 -

			Table 95	•
5		Ex. No.	Formula	MS
		1141	CH <sub>3</sub>	322 (M+H)
10			HO	
		1142		
15			HO N A	364 (M+H)
			СН	
20	•			
		1143	О	323.(M+H)
25	٠		HO	·
30		1144	HO CH <sub>3</sub>	363 (M+H)
35			HO H <sub>3</sub> C CH <sub>3</sub>	
33				
40		1145	ю Ст,	484 (M+H)
45	-	1146	9	385 (M+H)
50				363 (M+H)
		<u>.</u>		

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		. •	Table 96	
5	٠.	Ex. No.	Formula	MS
J		1147	HO N	427 (M+H)
10	-			
		1148		420 (M+H)
15			HO CH,	
20				
25		1149		508 (M+H)
30			HO TING	
35	·	1150		458 (M+H)
40			HO THE	
45		1151	P H	458 (M+H)
50			HO TO	

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		Table 97	
5	Ex. No.	Formula	MS
ŭ	1152	ÇI	474 (M+H)
10		но	
15	1153		
20	1153	l H	458 (M+H)
25		HO TO	
<b>30</b>	1154	F F	508 (M+H)
35		HO NO	
40	1155		
<b>45</b>		но по	54 (M+H)
50			

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		Table 98					
	,	Ex. No.	Formula	MS			
5		1156	,OMe .	470 (M+H)			
10			HO NO				
15				·			
		1157	н,с сн, Сн,	496 (M+H)			
20		. 1					
25			HOTT				
	•						
30		1158		482 (M+H)			
35			HO TO				
40		1159	HO N-CH,	448 (M+H)			
45		·					
50		1160	HO N N N N N N N N N N N N N N N N N N N	488 (M+H)			
55							

			Table 99	
5		Ex. No.	Formula ·	MS
-		1161		468 (M+H)
10			HO NO	
15				
20		1162	HO CH,	447 (M+H)
25		1163		
30		1163	HO N	466 (M+H)
35		1164	,OMe	526 (M+H)
40			HO NOME	
45				
50		1165	но	420 (M+H)
55	Ŀ			

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Тэ	nı	_	- 1	വ	

		Table 100	
	Ex. No.	Formula	MS
5	1166		490 (M+H)
		HO NO	
10			
			·
	1167		425 (24) 11)
15	110/	— сн <sub>я</sub>	435 (M+H)
		HO TI	
20	·		
	1168	0 СН3	436 (M+H)
25		HO HO	
		$\rightarrow$	
30	11.60		426 (26)
	1169	O-CH <sub>3</sub>	436 (M+H)
05		но	
35		W. W.	
40	1170		404 (M+H)
40		й н	
		HO	
45		o" "o	
70			•
ļ	1171	н,с	406 (M+H)
50		CH <sub>3</sub>	
		HO	ľ
		~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~	
55			
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			Table 101	
5		Ex. No.	Formula	MS .
10		1172	но Сн,	392 (M+H)
15		1173	H <sub>3</sub> C CH <sub>3</sub>	420 (M+H)
20	· ·			
25	:	1174	HO CH <sub>3</sub>	406 (M+H)
30	·	1175	,сн,	420 (M+H)
35	: .		но	
40	ŀ	1176		523 (M+H)
45			HO TO	
50		1177	The CH3 CH3 CH3	406 (M+H)

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т	<b>a</b>	h	1	e	1	n	2

	Ex. No.	Formula	MS
5	1178 -	/—сң,	447 (M+H)
		HO	
10	1		]
			_
15	1179	сн,	433 (M+H)
	•	/_\\\.	
		HO TO	
20		W W "o	
			· . [
	•		
	1180	/=\	509 (M+H)
25	·		
		g \(\bigc\)	
		HO N	
30			
	. ]		
35	1181	f	513 (M+H)
	1		
	-	<b>&gt;=</b> /	
		· / · · · · · · · · · · · · · · · · · ·	
40			
		HO TO TO THE TOTAL TO THE TOTAL TOTA	
45		$\nearrow$	
		$\vee$	}
	<del> </del>		

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Ex. No. Formula MS  1182  10  10  10  10  10  10  10  10  10  1			Table 103	
1182  1183  1184  1185  1186  1186  497 (M+H)  496 (M+H)  498 (M+H)  498 (M+H)  498 (M+H)  499 (M+H)  490 (M+H)	5	Ex. No.	Formula	MS
1183  1183  496 (M+H)  20  25  1184  30  418 (M+H)  40  45  1186  490 (M+H)  490 (M+H)	Ü	1182		497 (M+H)
20  25  1184  HO  N  418 (M+H)  30  35  1185  HO  HO  HO  HO  HO  HO  HO  HO  HO  H	10			
25 1184 HO N 30 1185 HO N 35 1186 HO	15	1100		
30  HO  HO  HO  HO  HO  HO  HO  HO  HO  H	<b>20</b> .	1183	HO N	496 (M+H)
35 1185 508 (M+H) 40 HO CH <sub>3</sub> 490 (M+H) 50	25	1104		
45 1186 HO CH <sub>3</sub> 490 (M+H)	30	1184	HO NO	418 (M+H)
45 1186 Q CH <sub>3</sub> 490 (M+H)	35	1185		508 (M+V)
50 HO NO	40			Joon (HTM)
50 HO NO	45	1186	Q /c+ş	490 (M+H)
		·		

Table 104

		Table 104	
	Ex. No.	Formula	MS
5	1187		441 (M+H)
10		HO HO	
	1188		455 (M+H)
15	1100		100 (11111)
. 20		HO	
	1189	n	455 (M+H)
25 .		HOTT	·
30	1190	OMe	513 (M+H)
	,	HO HO CH,	
. 40	1191	HO Br	504 (M+H)
45			
Ī	1192	F F	494 (M+H)
50	·	HO NO	
55	·		

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		Table 105	
5	Ex. No.	Formula	MS
	1193	р Сн,	512 (M+H)
10			
15 .	1194	HO Br	504 (M+H)
20	1195		
25	·	HO NO	516 (M+H)
30 .	1106		
35 :	1196	HO CH <sub>3</sub>	497 (M+H)
40	1197	но	456 (M+H)
<b>45</b>			
50	1198		509 (M+H)
55			

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		Ev. No.	Formula	MS
		Ex. No.	Formula	l MS
5		1199		483 (M+H)
		1133	. П	1403 (11111)
				i
			HO Y Y	] '
				i i
10			· • · · ·	j
		1200	0	427 (M+H)
	-		н –	
15	i		HO N	ŀ
		•		. '
			$\searrow$	
20	- 1			.}
20	- 1	1201		427 ()(11)
	.	1201		427 <sub>(M+H)</sub>
	. [		HO N	l
	• }			٠.
25	- 1		V V V	٠.
	-			
		1200		422 ()(, **)
20		1202	/=N	477 (M+H)
30		·	•	·
	. 1	,	I н ∕	
	.	İ	HO N	
				ļ
35			~ '\ _ 0	
	· 1			
				•
	ı	1203	Q N	519 (M+H)
	- [			
40	- }		HO Y S	
	٠ [		N W O CH	
	<b>\</b>			. 1
		.	<b>〈</b> ]	
45	L			
	- 1	1204		440 (M+H)
	- (		( )	
	· }	. [	Î H	
	1		HO N N	Į
50	1			
		[	, in the second of the second	·
	- 1	· ]	<u></u>	<u>}</u> .
		}		· .
55	L			
-				

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.1.3	ble	 07

	<del></del>	Table 107	
5	Ex. No.	Formula	MS
	1205	0	454 (M+H)
10		но	
15	1206	. 0	325 (M+H)
20		HO N F	
25 .	1207	HO CI	341 (M+H)
30	·		
35	1208	HO Br	385 (M+H)
40	1209	0	363 (M+H)
45		HO CH <sub>3</sub>	
50	1210	HO CN	332 (M+H)
55			
•		· · · · · · · · · · · · · · · · · · ·	

Table 108

		Table 108	
5	Ex. No.	Formula	MS
	1211	O II	351 (M+H)
10		но Сн,	
15	1212	Î	335 (M+H)
20		HO CH <sub>3</sub>	
	1213	0	349 (M+H).
: 25		HO CH <sub>3</sub>	
			٠.
30	1214.	9	321 (M+H)
<b>35</b>		но Сн,	
40	1215	HO N F F	375 (M+H)
45	1216		267 (W. U.)
50	1216	но	367 (M+H)

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	·	Table 109		
5	Ex. No.	Formula	MS	
	1217	ŷ Î	433 (M+H)	
10		HO CONTRACTOR OF		
15	1218	9	391 (M+H)	
20		HO F F		
25	1219	Î A N —	337 (M+H)	
		HO TO	·	
30		0-сн,		
	1220			
35	1220	HO Br	385 (M+H)	
40	1221		341 (M+H)	
45		HO CI		
50	1222	- A へ い	32 (M+H)	
		HO CN		
55				

Table 110

		Table 110	
5	Ex. No.	Formula	MS
3	1223	0	395 (M+H)
. 10		но сн,	
15	1224	HO CI	375 (M+H)
20		,a	
25	1225	HO CH <sub>3</sub>	351 (M+H)
30 .	1226	Ŷ	321 (M+H)
35		HO CH <sub>3</sub>	
40.	1227	HO HO	426 (M+H)
45			٠.
50	1228	но	460 (M+H)
55	• •		

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- 1	aIJ	1	_	- 1			

	F 27-	Table 111	
5	Ex. No.	Formula	MS
	1229	9 4	442 (M+H)
		но	1.
10			
15	1230	р (СН,	468 (M+H)
,,,		HO	
20			
	1231	7—он	456 (M+H)
		н /=<	, ,
25		HOTT	
	·		
30	1232		·
			494 (M+H)
		HO TO TO	
35			
	·		
	1233	OCN	451 (M+H)
40		HO TY	
45	1		
	1234	0	468 (M+H)
		о Сн,	
50			
55			
55			

Table 112

		Table 112	
5	Ex. No.	Formula	MS
5	1235	9	498 (M+H)
	ļ	HO HO	
		Ory Ory	
10			
	1236		476 (M+H)
15			,
		HO TIME	
20			
	1237		502 (M+H)
25		<b>\_</b> \>	
		n —	
	·	HO N N	
30			
		$\searrow$	
	·		
35	1238	9 4 7	505 (M+H)
		HO NH,	
40		$\rightarrow$	
į			
	1239		469 (M+H)
45		O NH <sub>2</sub>	•
		HO HO HO	
50			. 1
İ		$\vee$	
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	To M	Table 113	
5	Ex. No.	Formula	MS
10	1240		483 (M+H)
15	1241	но	408 (M+H)
20	1242		
25	1242	HO 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	460 (M+H)
30	1243	<u> </u>	468 (M+H)
<b>35</b>		HO CH,	400 (M+A)
40	1244	HO FF	494 (M+H)
45	1245		·
50		н,с	154 (M+H)
55			

Table 114

		. Idule 114	
_	Ex. No.	Formula	MS
5	1246	ңс	468 (M+H)
10			
15			·
20	1247	HO CH	498 (M+H)
25	1248	HO H,C CH,	482 (M+H)
30			
35	1249	но н,с сн,	468 (M+H)
40			
45	1250		460 (M+H)
50		HO	
55			•

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		Table 115	
5	Ex. No.	Formula	MS
	1251	ОН	442 (M+H)
10		HO TO THE STATE OF	
15			
20 _	1252	СН,	468 (M+H)
25		HO T	
30	1253	он он	456 (M+H)
35		HO TO TO TO TO TO TO TO TO TO TO TO TO TO	
40	1254	°	494 (M+H)
45		10 Th	
50			

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		Table 110	
	Ex. No.	Formula	MS
5	1255		451 (M+H)
		OCN	. '
		l D	
10		HO	
15			
•	1256		468 (M+H)
		о,	
20		) H	
		но	
_ 25			
	1257	о́ /сн,	498 (M+H)
30			·
35		но	
<u>.</u>			٠.
40			
ľ	1258	он.	470 (M+H)
45	·		
	·		
50		HO	
55 L	<del></del>		

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	En Ma	Table 117	
5	Ex. No.	Formula	MS
-	1259		476 (M+H)
10		HO THO	
15			
20	1260	HO HO H	502 (M+H)
25			
30	1261	O NH <sub>2</sub> S O	505 (M+H)
35		HO THO	
40			
45	1262	HO NH <sub>2</sub>	469 (M+H)

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Table 118 .

	Table 118						
	Ex. No.	Formula	MS				
5	1263		483 (M+H)				
	ļ	s T					
10							
		HOTT					
15							
	1264		408 (M+H)				
20		<b>%</b>					
		но					
25							
	10.65	<u> </u>	4.50 (15.11)				
30	1265	a	460 (M+H)				
35		HO N					
33	·						
40	1266		468 (M+H)				
10							
45		HO N					
50		$\cup$					

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		Table 119.	
5	Ex. No.	Formula	MS
	1267	F	494 (M+H)
10		N PH	
15		HO TIN	
20	1268	CH <sub>3</sub>	454 (M+H)
25		HO TO THE CH,	
30 .	1260		
35	1269	но СН,	468 (M+H)
40			
45	1270	, CH,	498 (M+H)
50 55			
		<u> </u>	

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		Table 120	
	Ex. No.	Formula ·	MS
5	1271	ңс	482 (M+H)
		СН	
10	'	( )=/	
	·		
	<b>]</b> .	HO	
15			,
	1		
•	1272	CH,	468 (M+H)
20	,	<b>⟨ ⟩</b>	
		o — ich,	,
		HO	
25			
		$\rightarrow$	
			·
30 .	. 1273	a	494 (M+H)
		a	
		° >=	
35			
		HO ( )	
		<u> </u>	
40		$\bigcup$	
	1274	о-сң,	484 (M+H)
45		n — M	
	,	но	
			.
50		ightharpoonup	
Į			·

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	· ·	Table 121	
5 ·	Ex. No.	Formula	MS
	1275	S CH <sub>3</sub>	519 (M+H)
10		HO HO H	·
15	1276		·
20		HO HO HO	427 (M+H)
25	1022		
30	1277	о—сн,	456 (M+H)
35		но	
40	1278		516 (M+H)
45		HO T N	
50			

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		Table 122	
	Ex. No.	Formula	MS
5	1279	о сн,	436 (M+H)
10		HO TO TO	
15			
20	1280	HO TO TO TO TO TO TO TO TO TO TO TO TO TO	426 (M+H)
25			
30	1281	HO N	440 (M+H)
35	1282		454 (M+H)
40		HO THO	
45	1283	<u> </u>	468 (M+H)
50		HO TO THE STATE OF	
55	·		

		Table 123	
•	Ex. No.	Formula	MS
5	1284		482 (M+H)
10		HO N N	
15	1005		
20	1285	но	406 (M+H)
25	1006		
30	1286	HO CH,	420 (M+H)
35	1287	a, ·	508 (M+H)
40		HO TO TO TO TO TO TO TO TO TO TO TO TO TO	
45	1288		
50	1200	HO N N N N N N N N N N N N N N N N N N N	508 (M+H)
55			

Table 124

5	Ex. No.	Formula	MS
5	1289		509 (M+H)
10 .	·		
15		HO TO	
20	1290		455 (M+H)
25		HO TO THE STATE OF	7. TH
30		$\bigcirc$	
35	1291	HO N H	494 (M+H)
40 .			
45	1292	HO NO NO NO NO NO NO NO NO NO NO NO NO NO	418 (M+H)
50			

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14	1) 1		- 1	_	

Ex. No. Formula 490 (	MS
1293	(36 . 75)
	(M+H)
10 HO HO	
15	. :
1294 CH <sub>3</sub> 496 (1)	M+H)
25	
30 HO N A77 (M	M+H)
35	
1296 HO HO HO F F	I+H)
45	
1297 HO N 470 (M-	+H)
55	

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Table 126 '

5	Ex. No.	Formula	MS ·
	1298	IJ_ <sup>CH</sup> ₃	435 (M+H)
40		n	•
10		HO	
			1
		$\rightarrow$	
15			
!	1299	ď	488 (M+H)
20	•	<b>&gt;=</b> /	
	•		
		HO N C	
25	÷		
		$\rightarrow$	
30	1300		454 (M+H)
55	·	о Ст,	_
		HO N	
35		$\searrow$	
·			
	1301		504 (M+H)
40 .		Br	
		n	
45		но	
		$\rightarrow$	
		V	

50

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Table 127

Ex. No. Formula MS  1302 H <sub>3</sub> C 513 (M-	
H <sub>3</sub> C 513 (M-	+H)
10	
15 HO N	
20 1303 0 399 (M+	H)
25 1304 530 (MA)	:-
30 HO NO STATE OF THE PARTY OF	<b>(E)</b>
35	
1305 H <sub>3</sub> C 504 (M+F	
45 HO HO HAC HAC HAC HAC HAC HAC HAC HAC HAC HAC	}
50	

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Table 128.

		Table 120			
_	Ex. No.	Formula	MS		
5	1307	,a	494 (M+H)		
10		HOTT			
15	. 1308	, CI	508 (M+H)		
•		<b>√ &gt;</b> −α			
20		HO N			
•		<u> </u>	·		
	1309		51 0 (M   11)		
25	1309		518 (M+H)		
			·		
30		HO T			
		V			
35	1310		532 (M+H)		
	i	HO	. **		
40					
	1311	a	522 (M+H)		
45		n H			
		HO 1			
		~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~			
50	·				
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	· .	Table 129	
	Ex. No.	Formula	MS
5	1312	, с <b>ч</b> ,	546 (M+H)
10		HO HO	
15			
20	1313	HO HO HO	484 (M+H)
25	1314		517 (Matr)
30		HO NO NO NO NO NO NO NO NO NO NO NO NO NO	517 (M+H)
35	1315	HO N	488 (M+H)
40			·
45 .	1316	HO CI	481 (M+H)
50			

	Ex. No.	Formula	MS
	EX. NO.	roimula .	} . H3
5	1317	0	413 (M+H)
	,131,		1   1
	,	HO	
·			· ·
10			l. i
	1220		402 (26.27)
	1318	l P	423 (M+H)
15	1	HO N · /	1
20			
20	1319	0	504 (M+H)
		HO NO NO	.
			[ · · [
25			
25	·		
	1320		510 (M+H)
		HO N / N	·
30			
			· •
	į į		·
35		ңс <del>-                                    </del>	
	1321		522 (M+H)
		HO N /	
40			
			·
45	1200	``a	522 ()(17)
	1322	0	522 (M+H)
		HO N P	•
			. 1
50		, H	]
		· ( ) ( »	
	Į		· 1
		F <del>_}</del> F	
55		F	

Table 131

		Table 131	•
5	Ex. No.	Formula	MS
	1323	)	484 (M+H)
10		HO TO TO TO TO TO TO TO TO TO TO TO TO TO	
15	1324	0—сн,	449 (M+H)
20	1205	но при при при при при при при при при при	
	1325	HO N P	502 (M+H)
25			
30	1326	# \a	491 (M+H)
35		HO N	
40	1327	H <sub>3</sub> C CH <sub>3</sub>	496 (M+H)
45			
50			·

Table 132

		Table 132			
5 .	Ex. No.	Formula	MS		
	1328	P	497 (M+H)		
. 10	·	HO N S N N N N N N N N N N N N N N N N N			
15	1329	·	470 (M+H)		
20		HO THO			
	1330	но	530 (M+B)		
25	1330	HO LINE OF THE PARTY OF THE PAR	530 (M+H)		
30	1331	g .	502 (M+H)		
35	1331	HO THE STATE OF TH	302 (HTH)		
40					
45	1332	HO TO THE STATE OF	522 (M+H)		
50	·				

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		Table 133	•
5	Ex. No.	Formula	MS .
J	1333		491 (M+H)
10		но	
15	1334		
20		HO C C C C C C C C C C C C C C C C C C C	536 (M+H)
25	1335		547 (M+H)
30 .	1336	S NH2	:
35		но	484 (M+H)
40 :	1337	HO L N	484 (M+H)
45		₩ Дось,	
50	1338		498 (M+H)
55	· · · · · · · · · · · · · · · · · · ·	0	• .

	<u> </u>	Table 134	
5	Ex. No.	Formula	MS
· ·	1339		528 (M+H)
10		HO CH,	
15	1340	Ŷ	498 (M+H)
20		HO HO H, C	
	1341	0	514 (M+H)
25			
30	·	CH,	
		ó, cң	
35	1342		513 (M+H)
40	1343	HO TO TO TO THE TOTAL PROPERTY OF THE TOTAL	488 (M+H)
45	·		
50 .	1344	HO C C	502 (M+H)
55			

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	Table 135				
5	Ex. No.	· Formula	MS		
	1345		488 (M+H)		
10		HO TO A			
15	1346	HO TO A CO	502 (M+H)		
20	1347				
25		HO NO <sub>2</sub>	499 (M+H)		
30	1348	HO L CONTRACTOR OF THE PARTY OF	480 (M+H)		
35 .	1349				
40			522 (M+H)		
45	1350		546 (M+H)		
50	Н	Br Br			

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		Table 136	
· . 5	Ex. No.	Formula :	MS
	1351	o II	482 (M+H)
10		HO CH <sub>3</sub>	
15	1352	0	484 (M+H)
20		HO HO CH,	
	1353	0	609 (M+H)
25		HO TO TO TO TO TO TO TO TO TO TO TO TO TO	
30		CH	
35	1354		532 (M+H)
40	1355	HO TO NH	480 (M+H)
45			. [
50	1356	HO HO HO HO HO HO HO HO HO HO HO HO HO H	566 (M+H)
55	·	CI	·

•	- 1-	3 .	4	~	-
- T	ar	ıle	- 1	3	- 1

		Table 137	
5	Ex. No.	Formula	MS
	1357		602 (M+H)
10		HO TO SOLUTION OF THE SOLUTION	
15	1358	HO N /	596 (M+H)
20	1350		
. 25	1359	HO TO TO TO TO TO TO TO TO TO TO TO TO TO	491 (M+H)
30	1360		491 (M+H)
. 35		HO THE N	
40	1361	HO LY	491 (M+H)
45	1260		
50	1362	to I I I I I I I I I I I I I I I I I I I	496 (M+H)
<sub>55</sub> L			

		Table 138	
5	Ex. No.	Formula <sub>.</sub>	MS
·	1363	0	512 (M+H)
10		HO CH <sub>3</sub>	·
<b>15</b> .	1364	HO LY CONTRACTOR OF THE PROPERTY OF THE PROPER	494 (M+H)
20		ц,с	
	. 1365		488 (M+H)
25		HO N A A	
	·	ңс 🗸	
30	1366	0	481 (M+H)
35		HO NH	
40	1367	HO 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	524 (M+H)
45			
50	1368		497 (M+H)
55		~	

		Table 139	
5	Ex. No.	Formula	MS
10	1369	HO TO TO TO TO TO TO TO TO TO TO TO TO TO	472 (M+H)
15	1370		469 (M+H)
20	·	HO TO TO TO TO TO TO TO TO TO TO TO TO TO	
25	1371	HO TO TO THE TOTAL PROPERTY OF THE TOTAL PRO	470 (M+H)
30	1372	ОН, СН,	469 (M+H)
<b>35</b> .		HO TO TO TO TO TO TO TO TO TO TO TO TO TO	
40	1373		494 (M+H)
45			
50	1374	HO TH OH	458 (M+H)
55			· · ·

	Table 140		
	Ex. No.	Formula	MS
5	1375	9	612 (M+H)
10		HO CI	
15	1376	Ŷ	554 (M+H)
20		HO CH <sub>3</sub>	
25	. 1377		542 (M+H)
		HO CH, CH,	
		ң¢	
30	1378		526 (M+H)
35		HO HO HO	
40	1379	0	496 (M+H)
45		HO H <sub>3</sub> C CH <sub>3</sub>	
50	1380	HO LY	510 (M+H)
55		CH <sub>3</sub>	

Table 141

		Table 141	
5	Ex. No.	Formula	MS
	1381	0	540 (M+H)
		HO CH,	· .
10			
	1.		
	1300		
15	1382		525 (M+H)
		HO CH,	
20		N CH <sub>3</sub>	: :
	1383	0	558 (M+H)
25		HO 10 /0	336 (M+H)
30	·		
	1384		523 (M+H)
35		HO TING	
		H-N	
		(a	
40	1385	a	
		HO N / O	539 (M+H)
45			
50		0—\ F F	
_			

Table 142

	Table 142		
5	Ex. No.	Formula	· MS
	1386	Ŷ.	533 (M+H)
	·	но	·
10		H-H CH,	
		H <sub>2</sub> C~O s	
15	1387		500 (M+H)
		HO N	
20		H-N	
	·		
	1200	NO <sub>2</sub>	405 (16: 17)
25	1388	N = 0	485 (M+H)
		HO TING	· :
30			
		, цс	
35	··1389	O II	523 (M+H)
		но	
40		H-U CI	
		( ) a—(_)	
	1390	o o	512 (M+H)
45		HON	
		N-H	
50		S N	
	-		
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Table	143

	En Va	Table 143	
5	Ex. No.	Formula	MS
	1391	HO TING	540 (M+H)
10		M-N-C	
15	1392	HO N HG	527 (M+H)
20	1393	H N S	
25	1353	HO TO THE TOTAL PARTY OF THE PA	525 (M+H)
30	1394	HO N	507 (M+H)
35			
40 .	1395	HO THE N	491 (M+H)
45			
50	1396		506 (M+H)
55			

		Table 144		
5	Ex. No.	Formula	MS	
J	1397	Î	522 (M+H)	
10		HO N A A		
15	1398	9	538 (M+H)	
20		HO P P F		
	1399	8	522 (M+H)	
25		HO TO A		
30 ·				
35	1400		530 (M+H)	
40 .	1401		600 (M+H)	
45				
50	1402	HO CH <sub>3</sub>	504 (M+H)	
55			·	

			· ·
	`	Table 145	•
	Ex. No.	Formula	MS
5	1403		
		9	534 (M+H)
	j	HO 10-CH	
10		h h	
		н <sub>с</sub> -о	
15	1404	Q II	475 (M+H)
75		HO N / O	
		y h	
20			
	1405	0 0 H	472 (M+H)
		)	
25	1 ' 1	HO N	
30	1406		
	1406	о <b>%</b> н	455 (M+H)
			·
		HO	
35	1	, , , , , , , , , , , , , , , , , , ,	
		$\rightarrow$	. ]
	1		
40	1407	0	160 ()(17)
		β <b>)</b>	169 (M+H)
	1		
45	]		
	1408		
	1	n %_H	47 (M+H)
50	l   H	10	
	]		
65		()	
55		O NH2	
•			

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	L 2 1	₽	- 1	4	О

	Table 146				
5	Ex. No.	Formula	MS.		
3	1409	0 % #	529 (M+H)		
		HO			
10		H NO2			
15	1410	o %_H	435 (M+H)		
,,		HO N			
		н,с и—сн,			
20					
	1411		504 (M+H)		
25		HO			
30					
30	1412	9	469 (M+H)		
		HO			
35					
40	1413	° > 4 ~	522 (M+H)		
	·	HO N			
		a' a'	·		
45		$\bigcirc$			
50	1414		488 (M+H)		
		HO			
		n a'			
55					
į					

		Table 147	
5	Ex. No.	Formula	MS
	1415	9 ~ 1	502 (M+H)
10		HO THO	
15	1416	HO TO TO TO TO TO TO TO TO TO TO TO TO TO	488 (M+H)
20		a	
. 25	1417	HO TY	502 (M+H)
30	1418		
35	1410	HO THE STATE OF TH	455 (M+H)
40	1419	но	455 (M+H)
45			
50	1420		522 (M+H)
55			

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	•	Table 148	•
5	Ex. No.	Formula	MS
	1421	o 0_H	469 (M+H)
10 .		HO N	
15	1422	9	536 (M+H)
20		HO NO CI	
25	1423		510 (M+H)
30		HO HO HIGO CHI	
35	1424	9 0 11 14	494 (M+H)
40		HO	
45	1425	9	458 (M+H)
50		HO N	

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	<u></u>	Table 149	
	Ex. No.	Formula	MS
5	1426	CI	612 (M+H)
10		HO	
15		CI	
20	1427	ОН	526 (M+H)
25		HO THE STATE OF TH	
30	1428		480 (M+H)
35		HO THO	
40	1429	HO TO TO TO TO TO TO TO TO TO TO TO TO TO	441 (M+H)
45			
50	1430		511 (M+H)
55		CH <sub>3</sub>	

		Table 150	
_	Ex. No.	Formula	MS ·
5	1431	O 0 H	530 (M+H)
		HO N	
10			
	1432	9, 11	497 (M+H)
15			
20			·
	1433		441 (M+H)
25	1433		441 (1111)
25		HO TO	
30	1434		491 (M+H)
			451 (11/11)
. 35	· ·	HO — N	
	1425		101/11/11
40	1435	j	491 (M+H)
	·	HO THE STATE OF TH	
45			·
i	1436		491 (M+H)
50		но ТТ	
55			

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		Table 151	·
5	Ex. No.	Formula	MS
	1437	HO N N	524 (M+H)
10	1430		
15	1438	HO TO TO TO TO TO TO TO TO TO TO TO TO TO	508 (M+H)
20	1439		474 (M+H)
25		HO T N C C C C C C C C C C C C C C C C C C	(174 (MTH)
30	1440	9 % #	490 (M+H)
35		HOLINA	
40	1441	но	508 (M+H)
45	1442	a	
50	1442		474 (M+H)
55			

	Table 152				
5	Ex. No.	. Formula	MS		
	1443	9 9_#	516 (M+H)		
10		HO \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\			
15	1444	a a	600 (M+H)		
20		HO CO			
25	1445		504 (25.51)		
30	1445	HO CH <sub>3</sub>	504 (M+H)		
35		н,с′сн,			
	1446	HO N O-CH <sub>3</sub>	534 (M+H)		
40		H <sub>3</sub> C-O CI			
45	1447		425 (M/ H)		
50	1447	HO THE STATE OF TH	475 (M+H)		
55		ĊI			

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		Table 153	
5	Ex. No.	Formula	MS
	1448		530 (M+H)
10		HO N	
15			
20	1449	HO HO	440 (M+H)
25	1450		490 (M+H)
<i>30</i> 35	1451	HO TO TO TO TO TO TO TO TO TO TO TO TO TO	474 (M+H)
40	1452		441 (M+H)
45		HO NO NO NO NO NO NO NO NO NO NO NO NO NO	
50 .	1453	HO HO	508 (M+H)
55		a	

		18016 124	1 1/0
5	Ex. No.	Formula	MS
	1454	9	455 (M+H)
10		HO HO N	÷
	1455	O ,	522 (M+H)
20		HO TO A	
		ď	406 (31.33)
25	1456	HO TO THE TOTAL PART OF THE TO	496 (M+H)
30		нс сн, н,с сн,	
35 .	1457	HO TO TO TO TO TO TO TO TO TO TO TO TO TO	516 (M+H)
40	1458	0	426 (M+H)
45	<u>.</u>		
}	1.450	<u> </u>	400 (14:11)
50	1459	HO CH,	482 (M+H)
55			
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10	u	7		·J	J

		Table 155	
5	Ex. No.	Formula	MS
	1460	Ŷ	486 (M+H)
10		HO CH <sub>3</sub>	
15	1461	9	516 (M+H)
20	1462	HO TO TO TO TO TO TO TO TO TO TO TO TO TO	
25	, 1402	HO	427 (M+H)
30	1463		47604
35		HO NO NO NO NO NO NO NO NO NO NO NO NO NO	476 (M+H)
40	1464	HO HO CI	460 (M+H)
45		$\smile$	
50		HO LO LO LO LO LO LO LO LO LO LO LO LO LO	502 (M+H)
55	•		

		Table 156	
5	Ex. No.	Formula	MS
3	1466	,cı	586 (M+H)
10		HO 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
15	1	$\bigcirc$	
	1467	9 /=\	518 (M+H)
20		HOTH	
25	1468	HO N /	530 (M+H)
30			
	1469	Î / ~	598 (M+H)
35		HO	
40	1470	Si .	512 (M+H)
	,	HO OH	
45			
	1471	Ŷ	544 (M+H)
50		10 T T T T T T T T T T T T T T T T T T T	
55			
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		Table 157	
5	Ex. No.	Formula	MS
10	1472	HO TO TO TO TO TO TO TO TO TO TO TO TO TO	440 (M+H)
15	1473	HO HO	490 (M+H)
20	1474		474 ()()
25		HO CI	474 (M+H)
30	1475		441 (M+H)
35			
40	1476	но да	508 (M+H)
45	1477		A.F.F. (34) 373
50		HO I TO THE TO THE TOTAL PROPERTY OF THE TOT	455 (M+H)
,			

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	Ex. No.	Formula	MS
5			
J	1478	8 — 🕅	522 (M+H)
		HO Y	
10	, '		
	1		
	1479	9 — H — CH	496 (M+H)
15			,,,,,
13		HO HO HIC CH	
•	·		
		· 1	,
20			
	1480		516 (M+H)
	1400	<b>⟨</b> ¯⟩	JIO (MTH)
25			
	٠.	A N	
		HO Y	
	·	N U	•
30	•		
		$\bigcup$	
	. 1481		426 (M+H)
_		<b>(</b> )	
35		,	
		HO \\\	
		N N	
40	•		į
Ì			·
	1482	ңс .	482 (M+H)
45		<b>├</b> -сн,	
45	1	сн,	
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•		9 ~ N	. ]
50	•	HO N	.
30	·		
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		Table 159	
5	Ex. No.	Formula	MS
	1483	осң,	486 (M+H)
10		но по по по по по по по по по по по по по	
15			
20	1484		516 (M+H)
25		HOLLY	
30	1485		427 (M+H)
<b>35</b>		HO TO TO TO TO TO TO TO TO TO TO TO TO TO	
40	1486		
45		HO L N	476 (M+H)
50			

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	Ex. No.	Formula	MS
5 .	1487	a	460 (M+H)
10		HO TO TO TO TO TO TO TO TO TO TO TO TO TO	
20 .	1488		502 (M+H)
25		HO TO	
<b>30</b> .	1489		586 (M+H)
35		Ho a	
40	1490	<b></b> 0	518 (M+H)
<b>45</b>			
50			

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		Table 161	
5	Ex. No.	Formula	MS
10	1491		530 (M+H)
15	1400	но	
20	1492	a—(	598 (M+H)
<b>25</b> .		HO	
30	1493		512 (M+H)
35	-	HO OH	
40	1494		544 (M+H)
45		HO N	
50			

		Table 102	
5	Ex. No.	Formula	MS
	1495	0=	580 (M+H)
10		HO CH,	
15	1496	a O	550 (M+H)
20		HO C	
25	1497	Ŷ	606 (M+H)
30		HO CH,	
35	1498	о-сң,	580 (M+H)
40		HO NO CO	
45	1499		550 (M+H)
50		HO CONTRACTOR OF THE PARTY OF T	
55			

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	•	Table 163	•
5	Ex. No.	Formula	MS
10	1500	н,с сн,	606 (M+H)
<b>15</b>		HO CI	
20	1501	HO NO NO NO NO NO NO NO NO NO NO NO NO NO	630 (M+H)
<b>25</b>		СН,	
30	1502	HO NOTE OF THE PARTY OF THE PAR	600 (M+H)
35	1503		-
40	1303	HO CH <sub>3</sub>	656 (M+H)
45		- OF F	

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5	Ex. No.	Formula	MS
J	1504	, ०–०५,	630 (M+H)
10		HO N OF	
15			
20	. 1505		600 (M+H)
. 25		HO TOFF	
30	1506	H,C CH,	656 (M+H)
35		HO PF F	
40	1507	) 	580 (M+H)
45		HO CH,	
50			

Т	ab	10	1	6	C

	Table 165			
5	Ex. No.	Formula	MS.	
	1508	Ŷ	550 (M+H)	
10				
15	1500	a		
20	1509	HO CH <sub>3</sub>	606 (M+H)	
25	1510	,осн,	580 (M+H)	
30	1511	HO CI		
40		HO CONTRACTOR OF THE PARTY OF T	550 (M+H)	
45				
50	1512	HO CH <sub>3</sub>	546 (M+H)	
<sub>55</sub>				

. Table 166

		. Table 166	
<b>-</b>	Ex. No.	Formula	MS
5	·1513	P	516 (M+H)
10		HO	
15	1514	но Сн,	572 (M+H)
20		н, с сн,	
25	1515	о-сн,	546 (M+H)
30		HO TING	
35	1516	HO N N	516 (M+H)
40			
45 .	1517	H <sub>2</sub> C CH <sub>3</sub>	572 (M+H)
50		HO TO TO TO TO TO TO TO TO TO TO TO TO TO	
55			

5	Ex. No.	Formula	MS
	1518	i .	602 (M+H)
10		HO CH,	
15		н <sub>с</sub> с	
20	1519	HO NO NO NO NO NO NO NO NO NO NO NO NO NO	572 (M+H)
25			
30	1520	H <sub>1</sub> C CH <sub>3</sub> H <sub>2</sub> C	628 (M+H)
35		но сн,	
40	1521	H <sub>1</sub> C CH <sub>3</sub>	
45	1521		606 (M+H)
50		H <sub>1</sub> C CH <sub>3</sub>	
. <b>L</b> 55			

5	Ex. No.	Formula	MS
	1522	Ŷ	573 (M+H)
10		HO	
15		H,C CH,	
20	1523	HO TO TO TO TO TO TO TO TO TO TO TO TO TO	606 (M+H)
25		U C CH	
30	1524	ңс — сң ңс ,о—сң	602 (M+H)
35		HO N CH <sub>3</sub>	
40			
45	1525	CH,	572 (M+H)
50		HO H <sub>3</sub> C CH <sub>3</sub>	
. 55			

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		Table 169	•
5	Ex. No.	Formula	MS
	1526	н,с	628 (M+H)
10	:	CH <sub>3</sub>	
15		но н,с сн,	
20	1527		606 (M+H)
<b>25</b>		HO H <sub>2</sub> CH <sub>3</sub>	
30	1528		606 (24.32)
35		HO CH,	606 (M+H)
40		н, с сн,	
45	1529	HO NO NO NO NO NO NO NO NO NO NO NO NO NO	614 (M+H)
50		CH <sub>3</sub>	

Та	hl	۵	1	7	a

	·	Table 170				
5	Ex. No.	Formula	MS			
3	1530	Q II	584 (M+H)			
	·	HO				
10						
15	1531	9	640 (M+H)			
		HO CH,				
20		н,с сн,				
20			·			
	1532	·	618 (M+H)			
25	1332	HO N	ore (M+H)			
		N N N C N C N C N C N C N C N C N C N C				
30		, FF				
	1533	,о-сн,	614 (M+H)			
35	-					
		HO N F F				
40						
45	1534		584 (M+H)			
	:	<b></b> >_				
		N CN F				
50		HO F F				
	1.					
55		<u>.</u>				
	<del></del>					

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•		Table 171	
5	Ex. No.	Formula	MS
	1535	н,с	640 (M+H)
10		CH, S	
15		HO FF	
20	. 1536		
		CI—CI	627 (M+H)
25		o HN	
30		HOTO	
35	1537	F	627 (M+H)
40			

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	Table 1/2	
Ex. No.	Formula	MS <sub>.</sub>
1538		560 (M+H)
	н	·
1539	HC-O NO	634 (M+H)
	,50 5	034 (11111)
	HN.	
	HO HO	
1540	,a	593 (M+H)
·		
		·
	HO NO NO NO NO NO NO NO NO NO NO NO NO NO	
1541	<u> </u>	627 (M+H)
1011	, a	
	, , , , , , , , , , , , , , , , , , ,	
·		
:		
	1539	1538  1539  HO  HO  HO  HO  HO  HO  HO  HO  HO  H

Ta	hl	۵	1	73
10	LU.			1.3

		Table 173	
5	Ex. No.	Formula	MS
	1542	F <sub>V</sub> F	627 (M+H)
10			
15		HO NO NO NO NO NO NO NO NO NO NO NO NO NO	
20	1543		560 (M+H)
25		HO T N T N T N T N T N T N T N T N T N T	
30	15.44		
35	1544	HO CH,	634 (M+H)
40			
45	1545		593 (M+H)
50		HO TO TO TO TO TO TO TO TO TO TO TO TO TO	
55	<del> </del>		

Table 174

	Table 174				
5	Ex. No.	Formula	MS		
3	1546		627 (M+H)		
10		HO TO TO THE TOTAL COLUMN			
		CI			
15					
	1547		627 (M+H)		
20			:		
		HO 1			
25		T <sub>F</sub>			
30	1548		560 (M+H)		
35	•	HO			
	· ·				
40	1549		634 (M+H)		
45		HO NO <sub>2</sub>			
		0-сн3	·		
50	:		·		

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			Table 175	
5		Ex. No.	Formula	MS
		1550	ر م	627 (M+H)
10				
15			HOTT	
20	:.	1551		560 (M+H)
25			HO TY	
30		1552		532 (M+H)
35			HO HO	
40				
45		1553	, CI	565 (M+H)
50				
55				

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		Table 1/6	
5	Ex. No.	Formula	MS
J	1554	α	599 (M+H)
		a	
10			
		HO NO NO NO NO NO NO NO NO NO NO NO NO NO	
. 15			
	•		
•	1555	F F	599 (M+H)
20		<b>→</b> F	
25			
		HO TO NOT TO SERVICE AND ADDRESS OF THE PARTY OF THE PART	٠, .
	•	\ \tag{\}	
30		$\bigcup$	
	1556		532 (M+H)
35	:		
		HO N	
40			
	1557		532 (M+H)
45	·	N N	
		HO N A	
50			
	. ]		
55	•		
- <del>-</del>			

Table 1//					
Ex. No.	Formula	MS .			
1558	HO N N N N N N N N N N N N N N N N N N N	584 (M+H)			
1559	HO HO	570 (M+H)			

Ex. No.	HCV polymerase inhibitory activity IC <sub>50</sub> [μΜ]	Ex. No.	HCV polymerase inhibitory activity IC <sub>50</sub> [μΜ]
2	0.079	67	0.26
6	0.034	68	0.28
9	0. 019	70	0.19
11	0.53	71	0.62
12	0.60	77	0.51
17	0.047	81	0.18
20	0.042	82	0.097
26	0.033	83	0.52
30	0. 052	85	0.17
43	0.58	86	0.13
44	0.95	87	0.80
45	0.40	88	0.092
46	0.47	89	0.34
47	0.54	90	0.20
48	0.44	91	0.53
49	0.94	93	0.16

Table 178 (continued)

Ex. No.	HCV polymerase inhibitory activity IC <sub>50</sub> [μM]	Ex. No.	HCV polymerase inhibitory activity IC <sub>50</sub> [μM]
50	0.54	94	0.084
51	1.0	96	0.25
54	0.56	97	0.16
55	0.36	98	0.30

5

10

45

50

55

Table 179

	lable 1/9					
	Ex. No.	HCV polymerase inhibitory activity IC <sub>50</sub> [μM]	Ex. No.	HCV polymerase inhibitory activity IC <sub>50</sub> [μΜ]		
15	99	0.53	120	0.16		
	100	0.78	121	0.19		
	101	0.14	122	0.51		
	103	0.17	123	0.10		
20	104	0.073	124	0.091		
	105	0.076	125	0.12		
	106	0.40	128	0.14		
25	107	0.11	129	0.12		
	108	0.21	130	0.16		
	109	0.11	131	0.046		
	110	0.24	132	0.055		
30	111	0.14	133	0.12		
	112	0.11	134	0.071		
	113	0.071	139	0.26		
35	114	0.56	140	0.11		
	115	0.17	141	0.43		
	116	0.37	142	0.055		
	117	0.075	143	0.053		
40	118	0.14	144	0.19		
	119	0. 13	145	0.088		

Ex. No.	HCV polymerase inhibitory activity IC <sub>50</sub> [μΜ]	Ex. No.	HCV polymerase inhibitory activity IC <sub>50</sub> [μМ	
146	0.043	167	0.033	
147	0.31	168	0.078	
148	0.038	169	0.15	
149	0.15	170	0.048	
150	0.24	171	0.050	
151	0.20	172	0.10	
153	0.19	173	0.14	
154	0.076	174	0.030	

Table 180 (continued)

Ex. No.	HCV polymerase inhibitory activity IC <sub>50</sub> [μΜ]	Ex. No.	HCV polymerase inhibitory activity IC <sub>50</sub> [μΜ]
155	0.53	175	0.29
156	0.23	176	0.053
157	0.16	177	0.077
158	0.11	178	0.052
159	0.13	179	0.63
160	0.24	180	0.11
161	0.062	181	0. 71
162	0.43	182	0.021
163	0.15	183	0.017
164	0.16	184	0.018
165	0.58	185	0.11
166	0.055	186	0.37

Table 181

Table 181				
25	Ex. No.	HCV polymerase inhibitory activity IC <sub>50</sub> [μM]	Ex. No.	HCV polymerase inhibitory activity IC <sub>50</sub> [μΜ]
	187	0.056	207	0.081
	188	0.038	208	0.039
0.	189	0.017	209	0.12
30	190	0.020	210	0.31
	191	0.43	211	0.059
	192	0.22	212	0.23
35	193	0.13	213	0.10
	194	0.52	214	0.059
	195	0.023	215	0.078
	196	0.20	216	0.084
40	197	0.11	217	0.058
	198	0.044	218	0.033
	199	0.11	219	0.13
45	200	0.10	220	0.073
	201	0.14	221	0.058
	202	0.095	222	0.041
	203	0.063	223	0.21
50	204	0.16	225	0.014
	205	0.077	227	0.045
	206	0.05	228	0.18

Table 182

	Ex. No.	HCV polymerase inhibitory activity IC <sub>50</sub> [μΜ]	Ex. No.	HCV polymerase inhibitory activity IC <sub>50</sub> [μM]
5	229	0.022	257	0.074
	230	0.17	259	0.10
	231	0.073	260	0.27
10	232	0.015	262	0.013
	233	0.028	263	0.035
	234	0.022	264	<0.01
	235	0.036	265	0.014
15	236	0.075	266	0.018
	237	0.015	267	0.014
	238	0.19	268	0.012
	239	0.17	269	0.013
20	240	0.055	270	0.012
	248	0.012	271	0.024
	249	0.022	272	0.066
25	250	0. 018	273	0.041
	252	0.32	276	0.023
30	253	0.65	279	0.017
	254	0.038	280	0.016
	255	0.038	281	0.052
	256	0.079	282	0.019

Table 183

Ex. No.	HCV polymerase inhibitory activity IC <sub>50</sub> [μΜ]	Ex. No.	HCV polymerase inhibitory activity IC <sub>50</sub> [μΜ]
283	0.014	300	0.045
284	0.014	301	0.017
285	0.012	303	0.10
286	0.014	304	0.017
287	0.012	305	0.01
288	0.013	306	0.013
289	<0.01	307	0.022
290	0.012	308	0.023
291	0.016	311	0.16
292	0.015	312	0.023
293	0.034	313	0.025
294	0.032	314	0.097
295	0.045	315	0.028
296	0.034	316	0.022

Table 183 (continued)

Ex. No.	HCV polymerase inhibitory activity IC <sub>50</sub> [μΜ]	Ex. No.	HCV polymerase inhibitory activity IC <sub>50</sub> [μΜ]
297	0.022	317	0.032
298	0.011	318	0.012
299	0.018	319	0.030

Table 184

Ex. No.	HCV polymerase inhibitory activity IC <sub>50</sub> [μΜ]	Ex. No.	HCV polymerase inhibitory activity IC <sub>50</sub> [μΜ]
320	0.036	328	0.015
321	0. 015	329	0.047
322	0.016	330	0.011
323	0.018	331	0.017
324	0.027	332	0.023
325	0.019	333	0.016
326	0.018	334	0. 016
327	0.019	335	0.013

Table 185.

Example No.	249	1H NMR(δ) ppm
HO N O S-N O O O O O O O O O O O O O O O O O O O		300MHz, DMSO-d6 8. 02 (1H, d, J=1. 5Hz), 8. 11 ( 1H, d, J=1. 8Hz), 7. 96-7. 81 ( 3H, m), 7. 67 (1H, s), 7. 61-7. 49 (6H, m), 7. 08 (2H, d, J=8. 6 Hz), 5. 19 (2H, s), 4. 25 (1H, m ), 2. 38-2. 17 (2H, m), 1. 96-1 . 78 (4H, m), 1. 70-1. 56 (1H, m ), 1. 46-1. 16 (3H, m), 1. 11 (9 H, s)
Purity > 90%	(NMR)	
MS 672 (	M+1)	

Example No.	250	1H NMR(δ) ppm
HO FF	CI -O O = S-NH <sub>2</sub> O	300MHz, DMSO-d6 8. 25(1H, d, J=1.5Hz), 8. 16- 8. 08(2H, m), 7. 99-7. 88(2H, m), 7. 66(2H, d, J=8.6Hz), 7. 60-7. 48(5H, m), 7. 19(2H, d, J=8.6Hz), 5. 17(2H, s), 4. 31 (1H, m), 2. 39-2. 20(2H, m), 2. 04-1. 79(4H, m), 1. 72-1. 60 (1H, m), 1. 50-1. 18(3H, m)
Purity > 9 0 %	(NMR)	
MS 616	(M+1)	·

Example	No.	251   1H NMR(δ) ppm
но	HCI	300MHz, DMSO-d6 cis and trans mixture 8. 13and8. 11(total 1H, each s), 7. 90-7. 74(2H, m), 7. 4 7. 22(5H, m), 4. 56and4. 52 otal 2H, each s), 4. 42(1H, brs), 3. 78-3 6(2H, m) 2. 33-1. 33(18H, m)
Purity	>9'0% (NMR)	
MS	433 (M+1)	

Table 186

Example	No.	252	1H NMR(δ) ppm ·
но			300MHz, DMSO-d6 8. 20(1H, d, J=1.5Hz), 7. 96(1H, d, J=8.6Hz), 7. 84(1H, dd, J=8.6, 1.5Hz), 7. 54(2H, d, J=6.9Hz), 7. 48-7. 26(8H, m), 7. 09(1H, t, J=7.3Hz), 5. 43(2H, s), 4. 06(1H, m), 2. 40-2. 20(2H, m), 2. 01-1. 80(4H, m), 1. 75-1. 64(1H, m), 1. 51-1. 28(3H, m)
Purity	>90% (NMR)		
MS.	509 (M+1)		·

Example No.	253	1H NMR(δ) ppm
HO		300MHz, DMSO-d6 8. 21 (1H, d, J=1. 5Hz), 7. 93 ( 1H, d, J=8. 7Hz), 7. 85 (1H, dd , J=8. 4, 1. 5Hz), 7. 54-7. 47 ( 2H, m), 7. 40-7. 24 (6H, m), 7. 15 (1H, d, J=3. 6Hz), 7. 11-7. 05 (1H, m), 6. 81 (1H, d, J=3. 6 Hz), 5. 26 (2H, s), 4. 96 (1H, m ), 2. 32-2. 13 (2H, m), 1. 95-1 .72 (4H, m), 1. 68-1. 55 (1H, m
Purity > 90% (N	MR)	), 1.43-1.18(3H, m)
MS 493 (M+1	)	

Example No.	254	IH NMR(δ) ppm
HO N N	N OH	300MHz, DMSO-d6 8. 25 (1H, s), 8. 02 (1H, d, J=8 . 7Hz), 7. 90 (1H, dd, J=8. 4, 1 . 4Hz), 7. 80-7. 71 (2H, m), 7. 67 (2H, d, J=8. 7Hz), 7. 33 (2H , t, J=8. 7Hz), 7. 26 (2H, d, J= 8. 7Hz), 5. 46 (2H, s), 4. 78 (2 H, s), 4. 31 (1H, m), 2. 39-2. 1 9 (2H, m), 2. 03-1. 79 (4H, m), 1. 71-1. 59 (1H, m), 1. 50-1. 1
Purity > 90% (NM)	R)	7(3H, m)
MS 558 (M+1)		

Table 187

Example	No.	255 <sup>-</sup>	1H NMR(δ) ppm
но	HCI O	H Z= S	300MHz, DMSO-d6 8. 34 (1H, s), 8. 32 (1H, d, J=8 .8Hz), 8. 09-8. 03 (3H, m), 7. 83 (2H, d, J=8. 3Hz), 7. 79 (2H ,d, J=8. 8Hz), 7. 36 (2H, d, J= 8. 8Hz), 5. 54 (2H, s), 4. 38 (1 H, m), 2. 74 (3H, s), 2. 40-2. 1 8 (2H, m), 2. 13-1. 96 (2H, m), 1. 93-1. 78 (2H, m), 1. 73-1. 5 7 (1H, m), 1. 55-1. 15 (3H, m)
Purity	>90% (NM	R)	
MS	568 (M+1)		

Example	No.	256	1H NMR(δ) ppm
но		F	300MHz, DMSO-d6 12. 67 (1H, brs), 8. 23 (1H, s), 7. 94and7. 87 (2H, ABq, J=8. 6Hz), 7. 79 (1H, dd, J=8. 7, 5. 4Hz), 7. 62-7. 41 (7H, m), 6. 8 0 (1H, dd, J=11. 9, 2. 3Hz), 6. 69 (1H, dd, J=8. 1, 2. 1Hz), 5. 20 (2H, s), 3. 93 (1H, brt, J=1 5. 3Hz), 2. 30-2. 11 (2H, brm) 1. 88-1. 74 (4H, brm), 1. 64-1
Purity	>90% (NMR)		.58(1H, brm), 1.41-1.14(3H , brm)
MS	585 (M+1)		

Example N	0.	257	lH NMR(δ) ppm
O II O S	CI N		300MHz, DMSO-d6 8. 19(1H, d, J=8. 7Hz), 7. 93(1H, s), 7. 83-7. 71(3H, m), 7. 50-7. 39(4H, m), 7. 34-7. 10(4H, m), 7. 06(1H, dd, J=8. 4, 2. 9Hz), 5. 09(2H, s), 4. 34(1H, m), 3. 82(3H, s), 2. 39-2. 19(2H, m), 2. 11-1. 98(2H, m), 1. 94-1. 79(2H, m), 1. 74-1. 58(1H, m), 1. 52-1. 21(3H, m)
Purity	>90% (NMR)		
MS	603 (M+1)		·

Table 188

Example	No.	258	IH NMR(δ) ppm
но			300MHz, DMSO-d6 7. 79(1H, d, J=6. 7Hz), 7. 56( 1H, d, J=7. 5Hz), 7. 49(2H, d, J=8. 6Hz), 7. 42(4H, s), 7. 32 -7. 23(3H, m), 7. 09-7. 03(3H, m), 5. 02(2H, s), 4. 46(1H, m), 3. 82(3H, s), 1. 95-1. 83(2H, m), 1. 75-1. 44(5H, m), 1. 3 0-1. 10(2H, m), 0. 89-0. 71(1H, m)
Purity	>90% (1	NMR)	
MS	. 567 (M+	1)	

Example No. 259	1H NMR(δ) ppm
2HCI HO N O N N N N N N N N N N N N N N N N	300MHz, DMSO-d6 8. 93 (2H, d, J=6. 6Hz), 8. 36 ( 1H, s), 8. 28 (1H, d, J=8. 7Hz) , 8. 10-8. 03 (3H, m), 7. 85 (2H, d, J=8. 7Hz), 7. 33 (2H, d, J=8. 7Hz), 7. 23 (1H, s), 7. 23 (1H, s), 6. 81 (1H, s), 5. 56 (2H, s), 4. 39 (1H, m), 2. 97, 2. 92 (6H, s), 2. 40-2. 18 (2H, m), 2. 16-1. 95 (2H, m), 1. 90-1. 75 (
Purity >90% (NMR)	2H, m), 1.70-1.55(1H, m), 1. 50-1.15(3H, m)
MS . 591 (M+1)	

	<u> </u>
Example No.	260 1H NMR(δ) ppm
2HCI HONOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO	300MHz, DMSO-d6 8. 93 (2H, d, J=6. 3Hz), 8. 35 (1H, s), 8. 26 (1H, d, J=8. 7Hz), 8. 09-8. 02 (3H, m), 7. 86 (2H, d, J=8. 7Hz), 7. 50 (1H, s), 7. 35 (2H, d, J=8. 4Hz), 7. 24 (2H, d, J=7. 8Hz), 5. 60 (2H, s), 4. 39 (1H, m), 2. 50-2. 18 (2H, m), 2. 15-1. 95 (2H, m), 1. 90-1. 75 (2H, m), 1. 70-1. 55 (1H, m)
Purity > 90% (NM	m) 1. 50-1. 10 (3H, m)
MS 564 (M+1)	·

Table 189

Example	No.	261	1H NMR(δ) ppm
HO O CI		300MHz, DMSO-d6 8. 22 (1H, d, J=7.8Hz), 7. 85 (1H, d, J=6.7Hz), 7. 63 (2H, d, J=9.0H), 7. 51-7. 38 (5H, m), 7. 29 (1H, d, J=8.3Hz), 7. 23 (1H, d, J=3.0Hz), 7. 06 (2H, d, J=9.0Hz), 7. 06 (1H, dd, J=8.6, 3.0Hz), 5. 05 (2H, s), 4. 41 -4. 25 (1H, m), 3. 83 (3H, s), 2. 40-2. 20 (2H, m), 2. 03-1. 78 (4H, m), 1. 72-1. 57 (1H, m)	
Purity	>90% (N	MR)	(4H, m), 1.72-1.57(1H, m), 1 .50-1.18(3H, m)
MS	567 (M+1	)	

Example	No.	262	1H NMR(δ) ppm
НО		CI -O HCI O-NH <sub>2</sub>	), 1. 93-1. 80 (2H, m), 1. 73-1
Purity	> 9 0 %	(NMR)	. 58 (1H, m), 1. 52-1. 20 (3H, m )
MS	580	(M+1)	

Example No.	263 1H NMR(δ) ppm
HO-C	300MHz, DMSO-d6 12. 85 (1H, brs), 8. 72 (1H, d, J=4. 8Hz), 8. 22 (1H, s), 8. 14 (1H, d, J=6. 3Hz), 8. 03and7. 76 (4H, ABq, J=8. 6Hz), 7. 93a nd7. 85 (2H, A'B'q, J=8. 7Hz), 7. 55 (1H, dd, J=6. 3, 4. 8Hz), 5. 19 (2H, s), 4. 26 (1H, brt, J=12. 6Hz), 2. 35-2. 1
Purity > 90% (NM	1 m/, 1. 10 1. 00 (1n, 01 m/, 1.
MS · · 548 (M+1)	45-1. 15(3H, brm)

Table 190

Example	No.	264	1H NMR(
но			300MHz, 8. 23 (1H 1H, dd, J 1H, d, J= J=8. 6Hz Hz), 7. 4 . 30 (1H, H, d, J=2 =8. 7Hz) , 2. 6Hz)
Purity	>90% (NMR)		1H, m), 3. 70(4H, m)
MS	586, 588 (M+1)		, 2. 30–2.

1H NMR(δ) ppm

300MHz, DMSO-d6

8. 23 (1H, d, J=1.0Hz), 7. 92 (
1H, dd, J=8. 7, 1.0Hz), 7. 87 (
1H, d, J=8. 7Hz), 7. 60 (2H, d, J=8.6Hz), 7. 47 (2H, d, J=8.7 Hz), 7. 44 (2H, d, J=8.7 Hz), 7. 30 (1H, d, J=8.3Hz), 7. 23 (1H, d, J=2.6Hz), 7. 11 (2H, d, J=8.7 Hz), 7. 06 (1H, dd, J=8.7 , 2.6Hz), 5. 04 (2H, s), 4. 36 (
1H, m), 3. 83 (3H, s), 2. 80-2. 70 (4H, m), 2. 60-2. 40 (2H, m), 2. 30-2. 20 (2H, m)

Example	No.	265
но	CI N HCI	» }~<
Purity	>90% (NMR)	
MS	608 (M+1)	

1H NMR(δ) ppm 300MHz, DMSO-d6 8. 30 (1H, d, J=1.5Hz), 8. 25 (1H, d, J=9.1Hz), 8. 03 (1H, dd, J=8.7, 1.5Hz), 7. 76-7.96 (3H, m), 7. 55-7.49 (5H, m), 7. 42 (1H, d, J=7.6Hz), 7. 23 (2H, d, J=8.7Hz), 5. 15 (2H, s), 4. 35 (1H, m), 3. 01 (3H, s), 2. 97 (3H, s), 2. 37-2. 20 (2H, m), 2. 09-1.97 (2H, m), 1. 94-1.81 (2H, m), 1. 72-1.60 (1H, m), 1. 50-1.21 (3H, m)

Example	No.	266
но	F F F HCI O	
Purity	>90% (NMR)	
MS	642 (M+1)	

1H NMR(δ) ppm

300MHz, DMSO-d6

8. 27(1H, d, J=1.5Hz), 8. 20(
1H, d, J=9.0Hz), 8. 00(1H, dd, J=8.6, 1.5Hz), 7. 82(2H, d, J=8.2Hz), 7. 76-7.65(5H, m), 7. 56(1H, dd, J=7.9, 1.8Hz), 7. 47(1H, d, J=7.5Hz), 7. 20(2H, d, J=8.6Hz), 5. 16(2H, s), 4. 32(1H, m), 3. 02(3H, s), 2. 98(3H, s), 2. 38-2. 19(2H, m), 2. 07-1. 95(2H, m), 1. 93-1. 80(2H, m), 1. 72-1. 58(1H, m), 1. 52-1. 18(3H, m)

Table 191

Example No.		267	1H NMR(δ) ppm
HO N	S' -O-O	) }~<	300MHz, DMSO-d6 8. 34 (2H, m), 8. 03 (1H, d, J=8 .3Hz), 7. 77-7. 68 (3H, m), 7. 54-7. 40 (4H, m), 7. 33 (2H, d, J=8. 6Hz), 7. 24 (2H, d, J=9. 0 Hz), 5. 16 (2H, s), 4. 36 (1H, m), 3. 01 (3H, s), 2. 97 (3H, s), 2. 40-2. 20 (2H, m), 2. 11-1. 9 7 (2H, m), 1. 93-1. 81 (2H, m), 1. 71-1. 60 (1H, m), 1. 50-1. 2
Purity >	90% (NMR)		1 (3H, m)
MS	620 (M+1)		

Example No. 26	B 1H NMR(δ) ppm
HCI FOR CI PORT OF THE PORT OF	300MHz, DMSO-d6 8.67-8.59(1H, m), 8.30(1H, s), 8.13-8.20(2H, m), 8.02-7.92(2H, m), 7.65(1H, t, J=8.3Hz), 7.56-7.45(5H, m), 7.18(1H, dd, J=12.0, 2.2Hz), 7.05(1H, dd, J=8.6, 2.2Hz), 5.14(2H, s), 4.09(1H, m), 2.82(3H, d, J=4.5Hz), 2.34-2.12(2H, m), 1.99-1.79(4H, m),
Purity > 90% (NMR)	1.71-1.59(1H, m), 1.49-1.2 1(3H, m)
MS 612 (M+1)	

Example No.	269	1H NMR(δ) ppm
HCI E	CI	300MHz, DMSO-d6 8. 29(1H, s), 8. 13(1H, d, J=9 .0Hz), 7. 97(1H, dd, J=8. 6, 1 .5Hz), 7. 71(1H, d, J=1. 8Hz) , 7. 63(1H, t, J=8. 2Hz), 7. 56 -7. 41(6H, m), 7. 17(1H, dd, J =12. 0, 2. 2Hz), 7. 03(1H, dd, J J=8. 2, 1. 8Hz), 5. 14(2H, s), 4. 15-4. 00(1H, m), 3. 01(3H, s), 2. 98(3H, s), 2. 32-2. 13(
Purity > 9 0 %	(NMR)	2H, m) 1.95-1.79(4H, m), 1.7 2-1.59(1H, m), 1.45-1.21(3
MS 626	M+1).	Н, ш)

Table 192

Example No.	270	1H NMR(δ) ppm
HCI CI	NH <sub>2</sub>	300MHz, DMSO-d6 8. 24 (1H, d, J=1. 4Hz), 8. 19 ( 1H, d, J=1. 8Hz), 8. 11 (1H, br s), 8. 02-7. 85 (3H, m), 7. 60- 7. 44 (7H, m), 7. 10 (1H, dd, J= 12. 0, 2. 1Hz), 6. 98 (1H, dd, J= 8. 4, 2. 1Hz), 5. 11 (2H, s), 3. 98 (1H, m), 2. 30-2. 12 (2H, m), 1. 91-1. 73 (4H, m), 1. 71-1 58 (1H, m), 1. 45-1. 15 (3H, m)
Purity > 9 0% (N	MR)	)
MS 598 (M+1	)	·

Example No.	271 1H NMR(δ) ppm
HCI HO HCI	300MHz, DMSO-d6 8. 29 (1H, d, J=1.5Hz), 8. 24 ( 1H, d, J=8.7Hz), 8. 07-7.98 ( 3H, m), 7. 80-7.68 (5H, m), 7. 56 (1H, dd, J=8.0, 1.8Hz), 7. 47 (1H, d, J=8.0Hz), 7. 21 (2H, d, J=8.4Hz), 5. 18 (2H, s), 4. 34 (1H, m), 3. 27 (3H, s), 3. 0 2 (3H, s), 2. 98 (3H, s), 2. 38- 2. 18 (2H, m), 2. 10-1.95 (2H,
Purity >90% (N	m) 1 02-1 70 (2H m) 1 70
MS 652 (M+1)	m)

Example No.	272	1H NMR(δ) ppm
O CIH	HCI -0 -N	300MHz, DMSO-d6 8. 97 (1H, d, J=1.8Hz), 8. 85 (1H, d, J=4.7Hz), 8. 46 (1H, d, J=8.0Hz), 8. 39-8. 26 (2H, m), 8. 06 (1H, d, J=8.7Hz), 7. 99 -7. 64 (6H, m), 7. 24 (2H, d, J=8.7Hz), 5. 25 (2H, s), 4. 36 (1H, m), 3. 03 (3H, s), 2. 97 (3H, s), 2. 39-2. 19 (2H, m), 2. 14-1. 96 (2H, m), 1. 94-1. 78 (2H,
Purity >90%	(NMR)	m), 1.73-1.60(1H, m), 1.21- 1.55(3H, m)
MS 575	(M+1)	

Table 193

Example	No.	273	lH NMR(δ) ppm
но			300MHz, DMSO-d6 8. 30 (1H, s), 8. 27 (1H, d, J=8 . 7Hz), 8. 05 (1H, d, J=8. 7Hz) , 7. 77-7. 67 (3H, m). 7. 58-7. 48 (6H, m), 7. 22 (2H, d, J=8. 4 Hz), 5. 18 (2H, s), 4. 35 (1H, b rt, J=9. 8Hz), 3. 06-2. 88 (12 H, brm), 2. 38-2. 20 (2H, brm) , 2. 08-1. 96 (2H, brm), 1. 90- 1. 80 (2H, brm), 1. 70-1. 60 (1
Purity	> 9 0 %	(NMR)	H, brm), 1. 49-1. 22 (3H, brm)
MS	645 (	(M+1)	

Example No.	274	1H NMR(δ) ppm
HO N O		300MHz, DMSO-d6 mixture of cis and trans 8. 35, 8. 34 (1H, s), 8. 15-8. 1 0 (2H, m), 7. 79-7. 70 (3H, m), 7. 49 (2H, d, J=8. 7Hz), 7. 44 ( 2H, d, J=8. 7Hz), 7. 31 (1H, d, J=8. 4Hz), 7. 25-7. 19 (2H, m) , 7. 07 (1H, d, J=8. 5Hz), 5. 08 (2H, s), 4. 75 (1H, m), 3. 83 (3 H, s), 3. 70-1. 90 (8H, m)
Purity about 80%(NMR)	•	
MS 601 (M+1)		

Example No.	275	1H NMR(δ) ppm
HO N SO		300MHz, DMSO-d6 8. 33 (1H, s), 8. 13 (1H, d, J=7.5Hz), 7. 93 (1H, d, J=8.8Hz), 7. 74 (2H, d, J=8.7Hz), 7. 49 (2H, d, J=8.6Hz), 7. 44 (2H, d, J=8.6Hz), 7. 31 (1H, d, J=8.5Hz), 7. 25-7. 15 (3H, m), 7. 07 (1H, d, J=8.5Hz), 5. 08 (2H, s), 4. 98 (1H, m), 3. 83 (3H, s), 3. 65-3. 45 (2H, m), 3. 30-3.
Purity > 90% (N	MR)	10 (2H, m), 3. 00-2. 75 (2H, m) , 2. 60-2. 30 (2H, m)
MS 617 (M+1	)	

## Table 194

Example No	. 27	6 1H NMR(δ) ppm
но	CI N N S	300MHz, DMSO-d6 8. 25 (1H, s), 7. 93and7. 87 (2 H, ABq, J=9. 1Hz), 7. 55 (1H, t , J=8. 6Hz), 7. 48and7. 42 (4H , A'B' q, J=8. 6Hz), 7. 31 (1H, d, J=8. 5Hz), 7. 24 (1H, d, J=2 . 6Hz), 7. 09-6. 95 (3H, m), 5. 05 (2H, s), 4. 11 (1H, brt, J=1 4. 0Hz), 3. 84 (3H, s), 2. 83-2 . 67 (4H, brm), 2. 50-2. 32 (2H
Purity	>90% (NMR)	, brm), 2.21-2.10(2H, brm)
MS	603 (M+1)	

Example	No. 277	7 1H NMR(δ) ppm
НО	CI N S S	300MHz, DMSO-d6 cis and trans mixture 8. 28and8. 24(total 1H, each s), 7. 94-7. 87(1H, m), 7. 60- 7. 41(5H, m), 7. 31(1H, d, J=8 . 5Hz), 7. 23-7. 21(1H, m), 7. 12-7. 05(2H, m), 7. 00-6. 95(1H, m), 5. 06and5. 05(total 2H, each
Purity	>90% (NMR)	s), 4. 47and4. 34 (total 1H, each
MS	619 (M+1)	brs), 3.83(3H, s), 3.12-1.7

Example No.	278 1н	NMR(δ) ppm
HO N SO	O 6.9 67 (	MHz, DMSO-d6 9(1H, brs), 8. 27(1H, s), 17 and 7. 74(2H, ABq, J=8. 6 , 7. 58(1H, t, J=8. 6Hz), 7 12 and 7. 43(4H, A'B'q, J=8. ), 7. 31(1H, d, J=8. 5Hz), 12(1H, d, J=2. 6Hz), 7. 13- 12(3H, m), 5. 05(2H, s), 4. 1H, brt, J=14. 2Hz), 3. 57 40(2H, brm), 3. 20-3. 05(
Purity > 90% (NM	2H,	brm), 2.91-2.70(2H, brm). 28-2.11(2H, brm)
MS 635 (M+1)		( () OI III/

Table 195

Example	No.	279	1H NMR(δ) ppm
но	HCI CI	S-N O O	300MHz, DMSO-d6 8. 30(1H, s), 8. 23(1H, d, J=8 .7Hz), 8. 06-8. 00(2H, m), 7. 83(1H, dd, J=8. 0, 1. 8Hz), 7. 71(2H, d, J=8. 4Hz), 7. 64(1H ,d, J=8. 0Hz), 7. 59-7. 54(4H ,m), 7. 22(2H, d, J=8. 4Hz), 5 .25(2H, s), 4. 33(1H, m), 2. 6 6(3H, s), 2. 66(3H, s), 2. 37- 2. 19(2H, m), 1. 93-1. 80(2H,
Purity	>90% (N	IMR)	m), 1.70-1.59(1H, m), 1.47- 1.21(3H, m)
MS	644 (M+	1)	

Example No. 280	1H NMR(δ) ppm
HCI CI HO N N N N N N N N N N N N N N N N N N	300MHz, DMSO-d6 8. 32-8. 23 (3H, m), 8. 08-8. 0 1 (2H, m), 7. 73 (2H, d, J=8. 6H z), 7. 65 (1H, d, J=8. 2Hz), 7. 59-7. 51 (4H, m), 7. 25 (2H, d, J=8. 6Hz), 5. 21 (2H, s), 4. 34 (1H, m), 3. 32 (3H, s), 2. 37-2 . 19 (2H, m), 2. 10-1. 98 (2H, m ), 1. 93-1. 80 (2H, m), 1. 71-1 . 60 (1H, m), 1. 51-1. 21 (3H, m
Purity >90% (NMR)	
MS 615 (M+1)	

Example No. 281	1H NMR(δ) ppm
HCI F O OH	300MHz, DMSO-d6 8. 30 (1H, d, J=1. 5Hz), 8. 24 ( 1H, s), 8. 14 (1H, d, J=8. 6Hz), 8. 07-7. 95 (2H, m), 7. 63 (1H, t, J=8. 6Hz), 7. 57-7. 47 (5H, m), 7. 16 (1H, dd, J=12. 0, 2. 2Hz), 7. 03 (1H, dd, J=8. 6, 2. 2Hz), 5. 17 (2H, s), 4. 06 (1H, m), 3. 90 (3H, s), 2. 31-2. 11 ( 2H, m), 1. 97-1. 78 (4H, m), 1.
Purity >90% (NMR)	71-1.59(1H, m), 1.43-1.22( 3H, m)
MS 315	

Table 196

Example	No.	28	32	1H NMR(δ) ppm
но	HCI	CI	CIH	300MHz, DMSO-d6 8. 36 (1H, s), 8. 35 (1H, d, J=9 . 3Hz), 8. 09 (1H, d, J=9. 3Hz) ,7. 78 (2H, d, J=8. 7Hz), 7. 48 -7. 25 (9H, m), 5. 09 (2H, s), 4 . 39 (1H, m), 3. 04 (6H, s), 2. 4 0-2. 15 (2H, m), 2. 10-1. 95 (2 H, m), 1. 90-1. 75 (2H, m), 1. 7 0-1. 55 (1H, m), 1. 50-1. 20 (3 H, m)
Purity	>90%	(NMR)		
MS	580	(M+1).		

Example No. 283	1H NMR(δ) ppm
HCI CI O O O O O O O O O O O O O O O O O	300MHz, DMSO-d6 10.03(1H, s), 8.33(1H, s), 8 .29(1H, d, J=8.7Hz), 8.06(1 H, d, J=9.0Hz), 7.74(2H, d, J =9.0Hz), 7.51-7.42(5H, m), 7.37-7.30(2H, m), 7.22(2H, d, J=8.7Hz), 5.10(2H, s), 4. 37(1H, m), 3.06(3H, s), 2.40 -2.18(2H, m), 2.15-1.95(2H, m), 1.90-1.80(2H, m), 1.75
Purity >90% (NMR)	-1. 55 (1H, m), 1. 50-1. 20 (3H , m)
MS 630 (M+1)	

Example No.	284	1H NMR(δ) ppm
HCI F		300MHz, DMSO-d6 8. 30(1H, s), 8. 14(1H, d, J=8 . 7Hz), 7. 97(1H, d, J=8. 7Hz) , 7. 96-7. 41(8H, m), 7. 16(1H , dd, J=12. 4, 2. 2Hz), 7. 03(1 H, dd, J=8. 4, 2. 2Hz), 5. 15(2 H, s), 4. 15(1H, m), 3. 54-3. 1 6(4H, m), 2. 33-2. 13(2H, m), 1. 97-1. 79(4H, m), 1. 70-1. 0 2(9H, m)
Purity > 9 0 %	(NMR)	
MS 654 (N	(+1)	÷

Table 197

Example No.	285	1H NMR(δ) ppm
HCI N N N N N N N N N N N N N N N N N N N	O ZII	300MHz, DMSO-d6 8. 37 (1H, d, J=7. 3Hz), 8. 30 ( 1H, s), 8. 19-8. 12 (2H, m), 8. 02-7. 95 (2H, m), 7. 65 (1H, t, J=8. 4Hz), 7. 56-7. 43 (5H, m), 7. 18 (1H, dd, J=12. 0, 1. 8Hz), 7. 06 (1H, dd, J=8. 4, 2. 1Hz), 5. 13 (2H, s), 4. 22-4. 03 (2H, m), 2. 34-2. 13 (2H, m), 1. 9 9-1. 78 (4H, m), 1. 72-1. 57 (1
Purity > 90% (	NMR)	H, m), 1.44-1.14(3H, m), 1.2 0, 1.18(6H, each s)
MS 640 (M	+1)	·

Example No.	286	1H NMR(δ) ppm
HCI F O		300MHz, DMSO-d6 8. 29(1H, s), 8. 13(1H, d, J=8 . 7Hz), 7. 97(1H, dd, J=8. 7, 1 . 4Hz), 7. 69-7. 40(8H, m), 7. 16(1H, dd, J=12. 0, 2. 2Hz), 7 . 02(1H, dd, J=8. 4, 2. 2Hz), 5 . 15(2H, s), 4. 07(1H, m), 3. 7 1-3. 23(2H, m), 1. 98-1. 71(4 H, m), 1. 71-1. 18(10H, m)
Purity , > 90% (N	MR)	
MS 666 (M+1	)	

Example No.		287	1H NMR(δ) ppm
HCI O N N	CI CI		300MHz, DMSO-d6 8. 29 (1H, s), 8. 13 (1H, d, J=8 . 0Hz), 7. 97 (1H, d, J=8. 4Hz) , 7. 83 (1H, s), 7. 68-7. 41 (7H , m), 7. 17 (1H, d, J=12. 0Hz), 7. 03 (1H, d, J=8. 4Hz), 5. 15 ( 2H, s), 4. 07 (1H, m), 3. 58-3. 41 (4H, m), 2. 34-2. 13 (2H, m) , 1. 97-1. 77 (8H, m), 1. 71-1. 58 (1H, m), 1. 49-1. 18 (3H, m)
Purity >	90% (NMF	2)	
MS	652 (M+1)		;

Table 198

Example No.	288	1H NMR(δ) ppm
HCI E CI	-NОН	300MHz, DMSO-d6 8. 62(1N, m), 8. 31(1H, s), 8. 22-8. 14(2H, m), 8. 99(2H, d, J=8. 7Hz), 7. 66(1H, t, J=7. 7 Hz), 7. 58-7. 44(5H, m), 7. 19 (1H, dd, J=8. 7, 2. 2Hz), 5. 14 (2H, s), 4. 11(1H, m), 3. 67-3 . 49(2H, m), 3. 45-3. 30(2H, m), 2. 37-2. 12(2H, m), 2. 00-1 . 76(4H, m), 1. 70-1. 58(1H, m)
Purity > 90% (NM)	R) ·	), 1. 48-1. 17 (3H, m)
MS 642 (M+1)		

Example No.	289 1	LH NMR(δ) ppm
HO N F O	М — ОН .	400MHz, DMSO-d6 8. 28(1H, s), 8. 11(1H, d, J=8 .9Hz), 7. 96(1H, d, J=8. 9Hz), 7. 68(1H, s), 7. 62(1H, t, J= 8. 2Hz), 7. 55-7. 41(6H, m), 7 15(1H, d, J=11. 7Hz), 7. 02(1H, d, J=8. 4Hz), 5. 14(2H, s) 4. 12-3. 13(6H, m), 2. 30-1.
Purity > 90% (NM	R)	
MS 682 (M+1)	·	·

Example No.	290	1H NMR(δ) ppm
HCI CI	 }-no	400MHz, DMSO-d6 8. 29(1H, s), 8. 15(1H, d, J=8 .6Hz), 7. 98(1H, d, J=8. 8Hz), 7. 72(1H, s), 7. 64(1H, t, J= 8. 8Hz), 7. 57-7. 43(6H, m), 7 .18(1H, dd, J=12. 1, 2. 1Hz), 7. 03(1H, d, J=10. 7Hz), 5. 12 (2H, s), 4. 15-4. 01(1H, m), 3 .75-3. 33(8H, m), 2. 31-2. 14 (2H, m), 1. 96-1. 78(4H, m), 1
Purity >90% (NMR	2)	. 70-1. 58 (1H, m), 1. 47-1. 21 (3H, m)
MS 668 (M+1)		

Table 199

Example No. 29	11 1H NMR(δ) ppm
HCI FOR N	400MHz, DMSO-d6 8. 29 (1H, s), 8. 14 (1H, d, J=8 . 9Hz), 7. 97 (1H, d, J=8. 6Hz) , 7. 71 (1H, s), 7. 63 (1H, t, J= 8. 2Hz), 7. 56-7. 42 (6H, m), 7 . 17 (1H, d, J=12. 3Hz), 7. 03 ( 1H, d, J=10. 7Hz), 5. 14 (2H, s ), 4. 07 (1H, m), 3. 96-3. 52 (4 H, m), 2. 79-2. 56 (4H, m), 2. 3 2-2. 14 (2H, m), 1. 97-1. 79 (4
Purity > 90% (NMR)	H, m), 1.71-1.58(1H, m), 1.5 1-1.19(3H, m)
MS 684 (M+1)	

Example No.	292 1H NMR(δ) ppm
HCI F O	300MHz, DMSO-d6 9.07-8.99(1H, m), 8.30(1H, s), 8.23-8.12(2H, m), 8.04- 7.95(2H, m), 7.65(1H, t, J=8 .2Hz), 7.60-7.45(5H, m), 7. 19(1H, dd, J=12.0, 2.6Hz), 7 .06(1H, dd, J=8.6, 2.2Hz), 5 .16(2H, s), 4.18-4.02(1H, m ), 3.97(2H, d, J=6.0Hz), 2.3 3-2.14(2H, m), 1.99-1.79(4
Purity >90% (NMR	H, m), 1. 72-1. 59(1H, m), 1. 4 5-1. 19(3H, m)
MS 656 (M+1)	

Example No.	. 293	1H NMR(δ) ppm
HO N	OH OH CI	300MHz, DMSO-d6:8. 21 (1H, s), 7. 94and7. 86 (2H, ABq, J=8.6Hz), 7. 72 (1H, d, J=2.4Hz), 7. 59and7. 11 (4H, A'B'q, J=8.9Hz), 7. 53 (1H, dd, J=8.4Hz), 7. 36and7. 32 (4H, A'B'q, J=8.1Hz), 5. 07 (2H, s), 4. 27 (1H, brt, J=13.8Hz), 2. 87 (2H, t, J=7.8Hz), 2. 57 (2H, t, J=
Purity >	90% (NMR)	7.8Hz), 2.35-2.20(2H, brm), 1.96-1.79(4H, brm), 1.68-
MS	637 (M+1)	1.59(1H, brm), 1.47-1.18(3 H, brm)

Table 200

Example	No.	294	1H NMR(δ) ppm
но	HCI CI	CI	300MHz, DMSO-d6 8. 30(1H, s), 8. 25and8. 03(2 H, ABq, J=8. 9Hz), 7. 73(1H, s ), 7. 73(2H, d, J=8. 6Hz), 7. 5 5(1H, dd, J=8. 0, 2. 3Hz), 7. 4 0(4H, s), 7. 39(1H, d, J=8. 0Hz), 7. 23(2H, d, J=8. 6Hz), 5. 11(2H, s), 4. 55(2H, s), 4. 36 (1H, brt, J=14. 8Hz), 2. 37-2 .19(2H, brm), 2. 09-1. 96(2H
Purity	>90% (NMR	)	, brm), 1.91-1.79(2H, brm), 1.71-1.59(1H, brm), 1.50-1
MS	567 (M+1)		. 20 (3H, brm)

Example No.	295 1H NMR(δ) ppm
HCI N	300MHz, DMSO-d6 8. 30(1H, s), 8. 25and8. 04(2 H, ABq, J=8. 7Hz), 7. 74(1H, s ), 7. 72(2H, d, J=8. 7Hz), 7. 5 6(1H, d, J=8. 7Hz), 7. 48-7. 3 5(5H, m), 7. 22(2H, d, J=8. 7Hz z), 5. 11(2H, s), 4. 46(2H, s), 4. 35(1H, brt, J=14. 8Hz), 3 . 31(3H, s), 2. 37-2. 17(2H, b rm), 2. 07-1. 95(2H, brm), 1.
Purity >90% (NMR)	92-1.79(2H, brm), 1.73-1.5 6(1H, brm), 1.52-1.20(3H, b
MS 581 (M+1)	rm)

Example	No.	296	1H NMR(δ) ppm
но		СІ	300MHz, DMSO-d6 8. 21 (1H, d, J=1.5Hz), 7.98 (1H, d, J=1.2Hz), 7.97-7.91 (2H, m), 7.84 (1H, dd, J=8.7, 1.5Hz), 7.70 (1H, d, J=7.5Hz), 7.60 -7.54 (4H, m), 7.43 (1H, d, J=8.4Hz), 7.09 (2H, d, J=8.7Hz), 5.05 (2H, s), 4.25 (1H, brt, J=14.8Hz), 2.36-2.18 (2H,
Purity	>90% (NMR)		brm), 1. 95-1. 79 (4H, brm), 1 .71-1.6(1H, brm), 1. 43-1. 1
MS	581 (M+1)		8 (3H, brm)

Table 201

Example No.	297	IH NMR(δ) ppm
HO N	CI	300MHz, DMSO-d6 12.7(1H, brs), 8.21(1H, s), 7.94and7.85(2H, ABq, J=8.6 Hz), 7.60-7.55(3H, m), 7.49 and7.45(4H, A'B'q, J=8.3Hz), 7.12(2H, d, J=8.7Hz), 5.0 5(2H, s), 4.26(1H, brt, J=13.0Hz), 2.54(3H, s), 2.38-2. 20(2H, brm), 1.97-1.80(4H, brm), 1.71-1.59(1H, brm), 1
Purity > 90% (N	MR)	.47-1.20 (3H, brm)
MS 583 (M+1	<b>)</b> ·	

Example	No.	2	98	1H NMR(δ) ppm
но		CI	s=o	300MHz, DMSO-d6 8. 22(1H, s), 8. 01(1H, s), 7. 95and7. 86(2H, ABq, J=8. 6Hz), 7. 79(1H, d, J=7. 8Hz), 7. 5 8(3H, t, J=7. 5Hz), 7. 53(4H, s), 7. 13(2H, d, 8. 7Hz), 5. 15 (2H, s), 4. 26(1H, brt, J=13. 8Hz), 2. 83(3H, s), 2. 37-2. 1 8(2H, brm), 1. 95-1. 78(4H, brm), 1. 70-1. 59(1H, brm), 1.
Purity	>90%	(NMR)		47-1. 17 (3H, brm)
MS	599	(M+1)		•

Example No.	299	1H NMR(δ) ppm
HCI CI N N N N N N N N N N N N N N N N N	N	300MHz, DMSO-d6 8. 43-8. 16 (3H, m), 8. 07-7. 9 4 (2H, m), 7. 72 (2H, d, J=8. 6H z), 7. 62-7. 49 (5H, m), 7. 23 ( 2H, d, J=8. 6Hz), 5. 16 (2H, s) , 4. 34 (1H, m), 2. 39-2. 20 (2H , m), 2. 10-1. 96 (2H, m), 1. 93 -1. 80 (2H, m), 1. 71-1. 58 (1H , m), 1. 49-1. 19 (3H, m)
Purity > 90% (NM	1R)	
MS 562 (M+1)		

Table 202

Example No.	300 1H	NMR(δ) ppm
HO N F O	N   rs   .5   .2   H, H, J= 8   .4	DOMHz, DMSO-d6:2. 77 (1H, bs), 8. 83 (2H, d, J=1. 9Hz), 8. 66 (2H, dd, J=4. 9, 1. 9Hz), 8. 62 (1H, d, J=1. 5Hz), 7. 97 (2 dt, J=7. 9, 1. 9Hz), 7. 95 (1 d, J=8. 6Hz), 7. 87 (1H, dd, 8. 6, 1. 5Hz), 7. 57 (1H, t, J. 7Hz), 7. 26 (1H, dd, J=7. 9. 9Hz), 7. 26 (1H, dd, J=12. 4. 9Hz), 7. 14 (1H, dd, J=8.
Purity >90% (NMF	8,	2.3Hz),6.99(2H,s),3.94 H,brt),2.26-2.09(2H,m)
MS 523 (M+1)	, 1	. 87-1. 73 (4H, m), 1. 67-1.

	001	
Example No.	301	1H NMR(δ) ppm
HO N F O O N O N O N O N O N O N O N O N	N-	300MHz, DMSO-d6 8. 22(1H, s), 7. 95(1H, d, J=8 . 7Hz), 7. 87(1H, dd, J=1. 5Hz , 9. 0Hz), 7. 62(4H, d, J=8. 4H z), 7. 55(1H, t, J=9. 0Hz), 7. 44(4H, d, J=8. 1Hz), 7. 20(1H, dd, J=2. 1Hz, 12. 0Hz), 7. 11 (1H, dd, J=2. 1Hz, 8. 7Hz), 6. 86(1H, s), 3. 94(1H, m), 2. 96 , 2. 88(12H, s), 2. 35-2. 00(2
Purity >90% (NMR)		H, m), 1.95-1.70(4H, m), 1.6 5-1.50(1H, m), 1.45-1.10(3
MS 663 (M+1)		Н, m)

Example No.	302	1H NMR(δ) ppm
Na <sup>+</sup> O-N F O	>\s\	300MHz, DMSO-d6 8. 14(1H, s), 7. 88(1H, d, J=8 .4Hz), 7. 68(1H, d, J=8. 7Hz) , 7. 64-7. 55(3H, m), 7. 50(1H , t, J=8. 7Hz), 7. 22-7. 17(3H , m), 7. 11(1H, s), 7. 08-7. 00 (2H, m), 3. 90(1H, m), 2. 15-2 .00(2H, m), 1. 95-1. 50(5H, m ), 1. 45-1. 00(3H, m)
Purity >90% (NMR	)	
MS 532 (M+1)	·	

Table 203

Example No.	303	1H NMR(δ) ppm
		300MHz, CDC13 8. 49 (1H, s), 7. 98 (1H, dd, J= 8. 6, 1. 5Hz), 7. 71 (1H, d, J=1 .8Hz), 7. 66 (1H, d, J=8. 6Hz) .7. 55-7. 29 (7H, m), 6. 80 (1H, dd, J=8. 2, 2. 2Hz), 6. 69 (1H, dd, J=11. 2, 2. 2Hz), 4. 99 (2H, s), 4. 10-3. 92 (1H, m), 3. 9 5 (3H, s), 3. 15 (3H, s), 3. 06 (3H, s), 2. 31-2. 14 (2H, m), 2.
Purity >90% (	NMR)	04-1.86(4H, m), 1.81-1.71( 1H, m), 1.41-1.21(3H, m)
MS 640 (M-	+1)	

Example No.	304	1H NMR(δ) ppm
O'Na <sup>+</sup>	CI	300MHz, DMSO-d6 8. 21 (1H, s), 7. 94 (1H, d, J=8 .7Hz), 7. 84 (1H, d, J=9. 1Hz) , 7. 70 (1H, s), 7. 26-7. 39 (9H , m), 7. 11 (2H, d, J=8. 4Hz), 5 .11 (2H, s), 4. 26 (1H, m), 3. 0 1 (3H, s), 2. 97 (3H, s), 2. 38- 2. 19 (2H, m), 1. 97-1. 78 (4H, m), 1. 72-1. 57 (1H, m), 1. 48- 1. 17 (3H, m)
Purity >90% (NMR)		
MS 608	3 (M+1)	

MO 000(M+1)		
Example No.	305	lH NMR(δ) ppm .
HO N F	CI O O O O O H	_ m), 1.92-1.73(4Н, m), 1.70- _ 1.57(1Н, m), 1.46-1.13(3Н,
Purity > 90%	(NMR)	<b>]</b> m)
MS 599(	M+1)	1

Table 204

Example No. 306	1H NMR(δ) ppm
HO-O HO-O N-O-O-O-O	300MHz, DMSO-d6 12. 84(1H, brs), 8. 21(1H, s) , 7. 98-7. 84(5H, m), 7. 58(2H, d, J=8. 7Hz), 7. 54(2H, d, J=7. 8Hz), 7. 34(1H, d, J=8. 7Hz), 7. 26(1H, d, J=2. 4Hz), 7. 13-7. 06(3H, m), 5. 06(2H, s), 4. 26(1H, brt, J=12. 7Hz), 3. 84(3H, s), 2. 36-2. 17(2H, brm), 1. 99-1. 80(4H, brm), 1.
Purity >90% (NMR)	73-1.59(1H, brm), 1.47-1.1 7(3H, brm)
MS 577 (M+1)	

Example No.	307	IH NMR(δ) ppm
H <sub>2</sub> N-		300MHz, DMSO-d6 8. 22(1H, s), 8. 04(1H, s), 7. 96(2H, d, J=8. 1Hz), 7. 87(2H, s), 7. 72(1H, d, J=1. 2Hz), 7. 59-7. 41(7H, m), 5. 12(2H, s), 4. 25(1H, brt, J=11. 8Hz), 3. 02(3H, brs), 2. 98(3H, brs), 2. 38-2. 15(2H, brm), 1. 93-1. 76(4H, brm), 1. 71-1. 59(1H, brm), 1. 46-1. 16(3H, brm)
Purity > 90% (	NMR)	)
MS 617 (M-	+1)	

Example No.	308	1H NMR(δ) pipm
но	CI >-O NH <sub>2</sub>	300MHz, DMSO-d6 8. 27 (1H, s), 8. 08 (1H, d, J=9 . 0Hz), 7. 93 (1H, d, J=8. 7Hz) , 7. 65 (2H, d, J=8. 7Hz), 7. 46 (2H, d, J=8. 1Hz), 7. 42 (2H, d , J=8. 4Hz), 7. 30-7. 04 (5H, m ), 5. 03 (2H, s), 4. 32 (1H, m), 2. 40-2. 10 (2H, m), 2. 05-1. 1 0 (8H, m)
Purity > 9 0 %	(NMR)	
MS 552	(M+1)	

Table 205

Example No.	309	1H NMR(δ) ppm
HO HCI N S		300MHz, DMSO-d6 8. 33(1H, s), 8. 15and7. 99(2 H, ABq, J=8. 9Hz), 7. 84and7. 59(4H, A'B'q, J=8. 3Hz), 7. 4 6(2H, d, J=8. 4Hz), 7. 22-7. 1 6(3H, m), 7. 01-6. 98(2H, m), 4. 27and4. 23(2H, A"B"q, J=1 2. 9Hz), 3. 78(3H, s), 2. 39-2 . 21(2H, brm), 2. 07-1. 95(2H , brm), 1. 91-1. 80(2H, brm),
Purity > 90% (NMR)		1.72-1.59(1H, brm), 1.49-1 .17(3H, brm)
MS		

Exam	ple No.	310	1H NMR(δ) ppm
НО	HCI N N	0 -S=0 -S=0 CI	300MHz, DMSO-d6 8. 33 (1H, s), 8. 09and7. 95 (2 H, ABq, J=8. 7Hz), 7. 87and7. 71 (4H, A'B'q, J=8. 0Hz), 7. 4 3 (2H, d, J=7. 8Hz), 7. 15 (1H, d, J=8. 7Hz), 7. 07-7. 02 (4H, m), 4. 66 (2H, s), 4. 23 (1H, br t, J=11. 8Hz), 3. 76 (3H, s), 2 .38-2. 20 (2H, brm), 2. 04-1. 93 (2H, brm), 1. 89-1. 79 (2H,
Puri	ty. >90%	(NMR)	brm), 1.70-1.59(1H, brm), 1 .49-1.18(3H, brm)
MS	615 (	M+1)	

Example No. 311	1H NMR(δ) ppm
HCI CI HO HCI N S	300MHz, DMSO-d6 8. 30(1H, s), 8. 21and8. 01(2 H, ABq, J=8. 7Hz), 7. 65(2H, d , J=8. 4Hz), 7. 52-7. 41(6H, m ), 7. 20(1H, d, J=8. 4Hz), 7. 1 4(1H, d, J=2. 7Hz), 6. 97(1H, dd, J=8. 4, 2. 4Hz), 4. 31(1H, brt, J=9. 8Hz), 4. 28(2H, s), 3. 78(3H, s), 2. 37-2. 20(2H, brm), 2. 07-1. 95(2H, brm), 1
Purity > 90% (NMR)	. 92-1. 80 (2H, brm), 1. 71-1. 60 (1H, brm), 1. 50-1. 19 (3H,
MS 583 (M+1)	brm)

Table 206

Example No.	312   1H NMR(δ) ppm
HO N O OH	300MHz, DMSO-d6 8. 22(1H, s), 8. 12(1H, d, J=8 . 4Hz), 8. 00-7. 84(5H, m), 7. 70(4H, d, J=8. 4Hz), 7. 56(1H , t, J=8. 6Hz), 7. 23(1H, d, J= 12. 0Hz), 7. 13(1H, d, J=8. 6H z), 6. 97(1H, s), 3. 92(1H, m) , 2. 35-2. 00(2H, m), 1. 95-1. 70(4H, m), 1. 65-1. 55(1H, m) , 1. 50-1. 05(3H, m)
Purity > 90% (NN	
MS 609 (M+1)	

Example No.	313	1H NMR(δ) ppm
HONN	-O -N	300MHz, DMS0-d6 8.89(1H, brs), 8.63(1H, brs), 8.24(1H, s), 8.11(1H, d, J) =7.8Hz), 7.99(1H, d, J=8.8Hz), 7.89(1H, d, J=9.9Hz), 7.61-7.55(4H, m), 7.43(2H, t, J=7.7Hz), 7.34(1H, t, J=7.2Hz), 7.24(1H, d, J=12.0Hz), 7.14(1H, d, J=8.6Hz), 6.95(1H, s), 3.96(1H, m), 2.35-2
Purity >9	0% (NMR)	05(2H, m), 2.00-1.50(5H, m), 1.45-1.10(3H, m)
MS	522 (M+1)	

Example No.	314	1H NMR(δ) ppm
N F	CI	300MHz, CDC13 8. 48 (1H, d, J=1. 4Hz), 8. 05 (1H, d, J=1. 8Hz), 8. 98 (1H, d, J=8. 6Hz), 7. 82 (1H, d, J=7. 9 Hz), 7. 66 (1H, d, J=8. 6Hz), 7. 55-7. 24 (6H, m), 6. 78 (1H, d d, J=8. 6, 2. 6Hz), 6. 69 (1H, d d, J=11. 6Hz), 2. 2Hz), 6. 40-6. 30 (1H, m), 4. 99 (2H, s), 4. 02 (1H, m), 3. 95 (3H, s), 3. 05
Purity > 90% (	NMR)	(3H, d, J=4.8Hz), 2.32-2.13 (2H, m), 2.03-1.87(4H, m), 1
MS 626 (M-	+1)	.81-1.71 (1H, m), 1.46-1.23

Table 207

Example N	0.	503	1H. NMR(δ) ppm
НО			300MHz, DMSO-d6 8. 23 (1H, s), 7. 76 (1H, d, J=8 . 7Hz), 7. 58 (1H, d, J=8. 8Hz) , 7. 51-7. 32 (7H, m), 7. 17 (2H , d, J=8. 7Hz), 6. 55 (1H, s), 5 . 18 (2H, s), 4. 75 (1H, m), 2. 3 5-2. 12 (2H, m), 2. 10-1. 85 (4 H, m), 1. 80-1. 50 (2H, m)
Purity	>90% (NMR)	)	·
MS .	412 (M+1)	· · ·	

Example	No.	701	1H NMR(δ) ppm
но	CI N N	) 	300MHz, DMSO-d6 8. 96(1H, s), 8. 50(1H, s), 7. 77(2H, d, J=8. 7Hz), 7. 50-7. 40(4H, m), 7. 30(1H, d, J=8. 4 Hz), 7. 24(1H, d, J=2. 4Hz), 7. 16(2H, d, J=8. 4Hz), 7. 06(1 H, dd, J=2. 4Hz, 8. 1Hz), 5. 06 (2H, s), 4. 31(1H, s), 3. 83(3 H, s), 2. 80-2. 55(2H, m), 2. 0 0-1. 80(4H, m), 1. 70-1. 55(1
Purity	>90% (NMR)	) ·	H, m), 1.40-1.15(3H, m)
MS	568 (M+1)		7

Table 208

Example	No.	315 1H NMR(δ) ppm
но	HCI N=	300MHz, DMSO-d6 8. 84 (2H, d, J=6. 3Hz), 8. 28 (1H, s), 8. 17 and 7. 99 (2H, ABq, J=8. 7Hz), 7. 87-7. 85 (3H, m), 7. 70 -7. 50 (3H, m), 7. 52 (1H, d, J=8. 3Hz), 7. 18 (2H, d, J=8. 7Hz), 5. 22 (2H, s) 4. 31 (1H, br t, J=12. 5Hz), 2. 36-2. 18 (2H, m), 2. 03-1. 78 (4H, m), 1. 70-1. 5 8 (1H, m), 1. 50-1. 23 (3H, m)
Purity	>90% (NMR)	
MS	538 (M+1)	

Example No.	316	1H NMR(δ) ppm
HCI HO N	CI THE THE THE THE THE THE THE THE THE THE	300MHz, DMSO-d6 9. 23 (1H, t, J=6. 3Hz), 8. 29 (1H, s), 8. 25-8. 22 (2H, m), 8. 03 (2H, d, J=7. 9Hz), 7. 55-7. 48 (5H, m) 7. 34 (4H, d, J=4. 4Hz), 7. 28-7. 22 (3H, m), 5. 15 (2H, s), 4. 52 (2H, d, J=5. 9Hz), 4. 35 (1H, br t, J=12. 1Hz), 2. 37-2. 18 (2H, m), 2. 08-1. 95 (2H, m), 1. 91-1. 79 (2H, m), 1. 59 (1H, m), 1. 47-1. 19 (3H, m), 1. 59 (1H, m), 1. 47-1. 19 (3H, m), 1. 59 (1H, m), 1. 47-1. 19 (3H, m), 1. 59 (1H, m), 1. 47-1. 19 (3H, m), 1. 59 (1H, m), 1. 47-1. 19 (3H, m), 1. 59 (1H, m), 1. 47-1. 19 (3H, m), 1. 59 (1H, m), 1. 47-1. 19 (3H, m), 1. 59 (1H, m), 1. 47-1. 19 (3H, m), 1. 59 (1H, m), 1. 47-1. 19 (3H, m), 1. 59 (1H, m), 1. 47-1. 19 (3H, m), 1. 59 (1H, m), 1. 47-1. 19 (3H, m), 1. 47
Purity >9(	0% (NMR)	na)
MS	670 (M+1)	

Example No.	317 1H NMR	(δ) ppm
HO HOI CI	8. 59 (11 s), 8. 21 Hz), 8. 1 2H, A' B' 23 (4H, A d7. 49 (4 . 14 (2H, t, J=12. Hz), 2. 3 78 (4H, m	DMSO-d6 H. t., J=5.5Hz), 8.28(1H, Hand8.01(2H, ABq, J=8.8 16(1H, s), 7.97and7.46( q. J=8.0Hz), 7.71and7. "B" q, J=8.7Hz), 7.53an H. A" B" q, J=9.2Hz), 5 s), 4.34(1H, br 8Hz), 3.14(2H, t, J=6.3 8-2.18(2H, m), 2.07-1. ), 1.78-1.47(7H, m), 1.
Purity > 9 0 %	47-1.07	(611, m), 1. 03-0. 83 (2H,
MS 676	(M+1)	•

Table 209

Example No.	318	1H NMR(δ) ppm
PHCI CI CI HO N N N N N N N N N N N N N N N N N N	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	300MHz, DMS()-d6 9.63 (1H, t, J=4.8Hz), 8.86and7.97 (4H, ABq, J=6.6Hz), 8.30 (1H, s), 8.27 (1H, s), 8.23and8.03 (2H, A'B'q, J=8.8Hz), 8.09and7.54 (2H, A'B'q, J=8.1Hz), 7.73and7.2 4 (4H, A''B'''q, J=8.8Hz), 7.54and7.52 (4H, A'''B'''q, J=8.8Hz), 5.16 (2H, s) 4.78 (2H, d, J=5.6Hz), 4.35 (1H, brt, J=11.0Hz), 2.39-2.19 (2H, m), 2.07-1.96 (2H, m), 1.91-1.78 (
Purity >90% (NMR)		, 2. 07-1. 96 (2H, m), 1. 91-1. 78 ( 2H, m), 1. 70-1. 57 (1H, m) 1. 50-1 . 19 (3H, m)
MS 671 (M+1)		. 13(3n, m/

Example No.	319	1H NMR(δ) ppm
HCI CI HCI N	n N	300MHz, DMSO-d6 8. 28(1H, s), 8. 24and8. 03(2H, A Bq, J=9. 0Hz), 7. 77(1H, s), 7. 70 (2H, d, J=8. 4Hz), 7. 64-7. 10(13 H, m), 5. 16(2H, s), 4. 74and4. 57 (total 2H, each br s), 4. 34(1H, br t, J=11. 7Hz), 2. 90(3H, s), 2. 35 -2. 17(2H, m), 2. 07-1. 93(2H, m) ,1. 93-1. 78(2H, m), 1. 71-1. 57( 1H, m), 1. 51-1. 19(3H, m)
Purity > 90% (NM)	₹)	·
MS 684 (M+1)		

Example No.	320	1H NMR(δ) ppm
PHCI HO N	N= O-N(	300MHz, DMSO-d6 8. 94and8. 06 (4H, ABq, J=6. 8Hz), 8. 33 (1H, s), 8. 28and8. 05 (2H, A'B'q, J=8. 7Hz), 7. 80 (1H, s), 7. 73and7. 22 (4H, A"B"q, J=8. 7Hz), 7. 63and7. 57 (2H, A"B"q, J= 7. 9Hz), 5. 30 (2H, s), 4. 34 (1H, b) r t, J=12. 1Hz), 3. 04 (3H, s), 2. 97 (3H, s), 2. 38-2. 18 (2H, m), 2. 10 -1. 96 (2H, m), 1. 93-1. 80 (2H, m)
Purity > 9 0 %	(NMR)	, 1. 72-1. 58 (1H, m), 1. 52-1. 08 ( 3H, m)
MS 575	(M+1)	

Table 210

Example No.	32	l 1H NMR(δ) ppm
O 2HCI	CI 	300MHz, DMSO-d6 11. 19 (1H, br s), 8. 31 (1H, s), 8. 23and8. 02 (2 H, ABq, J=9. 0Hz), 7. 77 (1H, s), 7 . 72and7. 23 (4H, A'B'q, J=8. 7Hz ), 7. 59and7. 48 (2H, A'B'q, J=7. 9Hz), 7. 53and7. 51 (4H, A'', B'', q , J=9. 0Hz), 5. 16 (2H, s), 4. 72-2 . 97 (8H, br m), 4. 34 (1H, br t, J=12. 1Hz), 2. 79 (3H, s), 2. 38 -2. 17 (2H, m), 2. 07-1. 93 (2H, m)
Purity >9	0% (NMR)	, 1. 93-1. 78 (2H, m), 1. 69-1. 58 ( 1H, m), 1. 50-1. 10 (3H, m)
MS	663 (M+1)	

Example No.	322	1H NMR(δ) ppm
PHCI CI CI N N N N N N N N N N N N N N N N		300MHz, DMSO-d6 9. 54 (1H, t, J=5. 7Hz), 8. 91 (1H, s), 8. 81 (1H, d, J=4. 9Hz), 8. 48 (1H, d, J=7. 9Hz), 8. 32 (1H, s), 8. 27 (1H, d, J=9. 0Hz), 8. 25 (1H, s), 8. 07-7. 97 (3H, m), 7. 74and7. 2 5 (4H, ABq, J=8. 9Hz), 7. 56-7. 49 (5H, m), 5. 16 (2H, s), 4. 69 (2H, d, J=5. 6Hz), 4. 36 (1H, brt, J=12. 4Hz), 2. 37-2. 20 (2H, m), 2. 09-1. 97 (2H, m), 1. 91-1. 78 (
Purity >90% (NMR)		2H, m), 1.70-1.57(1H, m), 1.50- 1.17(3H, m)
MS 671 (M+1)		

Example No.	323   1H NMR(δ) ppm
HO N O	300MHz, DMSO-d6 9. 52(1H, t, J=6.0Hz), 8. 72(1H, d, J=5.3Hz), 8. 30-8. 19(4H, m), 8. 08(1H, d, J=7.9Hz), 8. 02(1H, d, J=7.6HZ), 7. 77-7. 64(4H, m), 7. 57-7. 49(5H, m), 7. 24(2H, d, J=8. 7Hz), 5. 16(2H, s), 4. 77(2H, d, J=5.6Hz), 4. 34(1H, t, J=12.8 Hz), 2. 36-2. 19(2H, m), 2. 07-1. 95(2H, m), 1. 91-1. 78(2H, m), 1. 69-1. 59(1H, m), 1. 45-1. 20(3H, m)
Purity >90% (NMR	m)
MS 671 (M+1)	·

Table 211

Example No.	324	1H NMR(δ) ppm
HCI CI HO N O	) -U	300MHz, DMSO-d6 8. 36 (1H, d, J=7. 9Hz), 8. 30 (1H, s), 8. 28and8. 05 (2H, ABq, J=8. 8 Hz), 8. 16 (1H, s), 7. 79and7. 46 (2H, A'B'q, J=8. 3Hz), 7. 74and7. 25 (4H, A'B'q, J=8. 9Hz), 7. 52and7. 50 (4H, A''B''q, J=8. 7Hz), 5. 14 (2H, s), 4. 36 (1H, brt, J=12. 1Hz), 3. 80 (1H, brs), 2. 39-2. 18 (2H, m), 2. 10-1. 98 (2H, m), 1. 93-1. 57 (8H, m), 1. 4
Purity >90% (NMR	)	9-1.04(8H, m)
MS 662 (M+1)		· .

Example No.	•	325	lH NMR(δ) ppm
2HCI HO N	CI H N	N	300MHz, DMSO-d6 8. 86 (1H, t, J=6. OHz), 8. 84and8 .00 (4H, ABq, J=6. 6Hz), 8. 33 (1H ,s), 8. 27and8. 04 (2H, A'B'q, J= 9. OHz), 8. 12 (1H, s), 7. 92and7. 46 (2H, A"B"q, J=7. 9Hz), 7. 74an d7. 23 (4H, A"B"'q, J=9. OHz), 7 .53and7. 49 (4H, A""B""q, J=9. 1 Hz), 5. 13 (2H, s), 4. 36 (1H, br t, J=12. 8Hz), 3. 70 (2H, td, J=6. 8, 6. OHz), 3. 21 (2H, t, J=6. 8Hz)
Purity > 9	0% (NMR)		, 2. 38-2. 20 (2H, m), 2. 09-1. 95 ( 2H, m), 1. 91-1. 77 (2H, m), 1. 70- 1. 59 (1H, m), 1. 49-1. 20 (3H, m)
MS :	685 (M+1)		1. 55(1n, m), 1. 45~1. 20(3n, m)

Example No.	326   1H NMR(δ) ppm
HO N F	300MHz, DMSO-d6 12.80(1H, brs), 8.23(1H, s), 7. 90(1H, d, J=8.7Hz), 7.83(1H, d, J=8.7Hz), 7.60-7.50(5H, m), 7. 39(2H, d, J=7.8Hz), 7.23-7.10 3H, m), 7.05(1H, d, J=7.8Hz), 6. 85(1H, s), 3.94(1H, s), 2.97, 2. 88(6H, s), 2.30-2.10(2H, m), 1. 90-1.50(5H, m), 1.40-1.00(3H, m)
Purity > 90% (	IMR)
MS 610 (M-	1)

Table 212

Example No.	327   1H NMR(δ) ppm
HO N F	300MHz, DMSO-d6 13.20-12.60(2H, brs), 8.23(1H, s), 7.98(2H, d, J=6.6Hz), 7.95 (1H, d, J=8.7Hz), 7.87(1H, d, J=8.7Hz), 7.70-7.50(5H, m), 7.27 -7.20(3H, m), 7.08(1H, d, J=7.8 Hz), 6.90(1H, s), 3.93(1H, s), 2 .51-2.05(2H, m), 1.90-1.70(4H, m), 1.65-1.55(1H, m), 1.40-1. 10(3H, m)
Purity > 9 0 %	NMR)
MS 583 ()	1)

_	Table 213		
5			\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
. 10		HO2C N	$ \begin{array}{c c}  & 3 \\  & 1 \\  & 2 \\  & 3 \\  & 6 \\  & 5 \end{array} $
15	Ex. No.	. R	R'
	2001	-Н	4-(-Me)
	2002	-Н	3- (-CF <sub>3</sub> )
20	2003	5- (-F)	-н
	2004	3-(-F)	2-(-F)
	2005	3-(-F)	3- (-F)
25	2006	3-(-F)	4-(-F)
•	2007	4-(-F)	4-(-F)
	2008	5-(-F)	4-(-F)
30	2009	. 6-(-F)	4-(-F)
	2010	4-(-F)	4-(-Cl)
	2011	5-(-F)	4-(-Me)
35	2012	5-(-F)	4-(-CF <sub>3</sub> )
	2013	5-(-F)	4-(-CO <sub>2</sub> H)
	2014	5- (-F)	4-(-CO <sub>2</sub> Me)
40	2015	5-(-F)	4- ( - N )
	2016	5-(-F)	4-(-CONH <sub>2</sub> )
45	2017	5-(-F)	4-(-CON (Me) <sub>2</sub> )
	2018	5-(-F)	4-(-OMe)
	2019	5-(-F)	4-(-SMe)
50 .	2020	5- (-F)	4- ( - S-Ne )
	2021	5-(-F)	4- (-S-Ne) (-S-Ne)

			·
	2022	4-(-Cl)	-H
5	2023	4-(-C1)	4-(-F)
	2024	4-(-Cl)	4-(-Cl)
	2025	4-(-Cl)	4-(-Me)
10	2026	5-(-C1)	4-(-CF <sub>3</sub> )
	2027	. 4-(-Cl)	4- (-CO <sub>2</sub> H)
	2028	5-(-Cl)	4-(-CO <sub>2</sub> Me)
15	2029	5-(-Cl)	4- ( - N )
	2030	4-(-Cl)	4-(-CONH <sub>2</sub> )
20	2031	5-(-Cl)	4-{-CON (Me) <sub>2</sub> }
	2032	5-(-Cl)	3- (-OMe)
	2033	4-(-C1)	4- (-SMe)
25	2034	5-(-C1)	4 - ( - S-Ne)
	2035	4-(-C1)	4 - (-Š-Me)
30	2036	5-(-CN)	4-(-F)
	2037	4-(-CN)	4-(-C1)
	2038	5-(-NO <sub>2</sub> )	4-(-F)
35	2039	4-(-NO <sub>2</sub> )	4-(-C1).
	2040	5-(-Me)	4-(-CO <sub>2</sub> H)
	2041	5-(-Me)	4-(-CO <sub>2</sub> Me)
40	2042	5-(-Me)	4-(-1-1-)
	2043	5-(-CF <sub>3</sub> )	4-(-CO <sub>2</sub> H)
45	2044	5-(-CF <sub>3</sub> )	4-(-CO <sub>2</sub> Me)
	2045	5-(-CF <sub>3</sub> )	4- ( - N )
50	2046	5-(-CO <sub>2</sub> H)	4-(-F)
	2047	4-(-CO <sub>2</sub> H)	4-(-C1)
	2048	5-(-CO <sub>2</sub> Me)	4-(-F)

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	2049	5-(-CO <sub>2</sub> Me)	4-(-Cl)
5	2050	5- (-Ac)	4-(-F)
	2051	5- (-Ac)	4-(-C1)
10	2052	<sub>5-</sub> ( ੀ )	-н
	2053	5- ( - )	4-(-F)
15	2054	5-(-1-1)	4-(-C1)
	2055	5-(-1-1-)	4-(-CN)
20	2056	5-(-1-1-1-)	4-(-NO <sub>2</sub> )
	2057	5-(-1	4-(-Me)
25	2058	<sub>5-</sub> ( Î )	4-(-CF <sub>3</sub> )
	2059	5-(-1-1-)	4-(-Ac)
30	2060	5-(-1-1-)	4 - ( -CO₂H)
	2061	·5- (- <u>1</u> + (-)	4-(-CO <sub>2</sub> Me)
35	2062	5-()	4-(-1-1-)
40	2063	5-(-1-1-)	4-(-CONH <sub>2</sub> )
	2064	5- ()	4-{-CON (Me) <sub>2</sub> }
45	2065	5- ( - )	4-{-C(=NH)NH <sub>2</sub> }
	2066	5- (-1-N-)	4-(-OMe)
50	2067	5-()	4-(-0-CH <sub>2</sub> -N-)
	2068	;- ( - N )	. 4-(-NHMe)

			·
5	2069	5- ( - N )	4-(-NHAC)
	2070	5- ( - N )	4- (-N-Ş-He)
10	2071	. <sub>5-</sub> (N-)	4-(-SMe)
	2072	· <sub>5-</sub> ( - N )	4 - (-s-Ne)
15	2073	<sub>5-</sub> ( - N )	4- (-s-Ne)
	2074	<sub>5-</sub> (N-)	9 (-ё-мн <sub>2</sub> ) 4 - ё
20 .	2075	<sub>5-</sub> (-l <sub>-</sub> (-))	4- { -\$ -N (Me), }
	2076	5- (-CONH <sub>2</sub> )	-н
25	2077	5- (-CONH <sub>2</sub> )	4-(-F)
	2078	5- (-CONH <sub>2</sub> )	2,3,4,5,6-penta-(-F)
	2079	5-(-CONH <sub>2</sub> )	2-(-C1)
30	2080	5-(-CONH <sub>2</sub> )	3-(-C1)
	2081	3- (-CONH <sub>2</sub> )	2-(-Cl)
	2082	3-(-CONH <sub>2</sub> )	3- (-Cl)
<b>35</b> .	2083	3- (-CONH <sub>2</sub> )	4-(-C1)
	2084	4-(-CONH <sub>2</sub> )	2-(-C1)
	2085	4-(-CONH <sub>2</sub> )	· 3-(-C1)
40	2086	4-(-CONH <sub>2</sub> )	4-(-C1)
	2087	6-(-CONH <sub>2</sub> )	2-(-C1)
	2088	6- (-CONH <sub>2</sub> )	3-(-C1)
45	2089	6- (-CONH <sub>2</sub> )	4-(-C1)
•	2090	5- (-CONH <sub>2</sub> )	3,5-di-(-C1)
	2091	5-(-CONH <sub>2</sub> )	4-(-CN)
50	2092	5-(-CONH <sub>2</sub> )	4-(-NO <sub>2</sub> )
	2093	5-(-CONH <sub>2</sub> )	4-(-Me)
	·		

÷	2094	5- (-CONH <sub>2</sub> )	2,6-di-(-Me)
5	2095	5- (-CONH <sub>2</sub> )	4-(-CF <sub>3</sub> )
	2096	5- (-CONH <sub>2</sub> )	4-(-Ac)
	2097	5- (-CONH <sub>2</sub> )	4-(-CO <sub>2</sub> H)
10	2098	5- (-CONH <sub>2</sub> )	4-(-CO <sub>2</sub> Me)
	2099	5- (-CONH <sub>2</sub> )	4- (-9-N-)
15	2100	5- (-CONH <sub>2</sub> )	4-(-CONH <sub>2</sub> )
	2101	5-(-CONH <sub>2</sub> )	3,5-di-(-CONH <sub>2</sub> )
·	2102	5- (-CONH <sub>2</sub> )	4-{-CON (Me) <sub>2</sub> }
20	2103	5- (-CONH <sub>2</sub> )	4-{-C (=NH) NH <sub>2</sub> }
	2104	5- (-CONH <sub>2</sub> )	4-(-OMe)
	2105	5- (-CONH <sub>2</sub> )	3,4,5-tri-(-OMe)
25	2106	5- (-CONH <sub>2</sub> )	4-(-0-CH; N)
	2107	5- (-CONH <sub>2</sub> )	4-(-NHMe)
30 .	2108	5- (-CONH <sub>2</sub> )	4-(-NHAc)
	2109	5- (-CONH <sub>2</sub> )	4- (-N-S-Me)
35	2110	5-(-CONH <sub>2</sub> )	4-(-SMe)
	2111	5- (-CONH <sub>2</sub> )	4 - ( 0 - Š-Ne)
40	2112	5- (-CONH <sub>2</sub> )	4 - (-5-Me)
	. 2113	5- (-CONH <sub>2</sub> )	4 - (-\$ -NH <sub>2</sub> )
45	2114	5-(-CONH <sub>2</sub> )	$4 - \left\{ \begin{array}{c} 0 \\ -\ddot{S} - N \text{ (Me)}_{2} \end{array} \right\}$
	2115	5-{-CON (Me) <sub>2</sub> }	-н
50	2116	5-(-CON (Me) <sub>2</sub> }	4-(-F)
•	2117	4-{-CON(Me) <sub>2</sub> }	4-(-Cl)
	2118	5-{-CON (Me) <sub>2</sub> }	4-(-CN)

	2119	5-{-CON (Me) <sub>2</sub> }	4-(-NO <sub>2</sub> )
5	2120	5-(-CON (Me) <sub>2</sub> )	4-(-Me)
	2121	4-(-CON (Me) <sub>2</sub> )	4-(-CF <sub>3</sub> )
	2122	5-{-CON (Me).2}	4-(-Ac)
10	2123	5-{-CON (Me) <sub>2</sub> }	4-(-CO <sub>2</sub> H)
·	2124	5-{-CON(Me) <sub>2</sub> }	4-(-CO <sub>2</sub> Me)
15	2125	5-{-CON (Me) <sub>2</sub> }	4- ( - N )
•	2126	5-{-CON (Me) <sub>2</sub> }	3-(-CONH <sub>2</sub> )
	2127	4-{-CON (Me) <sub>2</sub> }	4-{-CON (Me) <sub>2</sub> }
20	2128	5-{-CON (Me) <sub>2</sub> }	4-{-C (=NH) NH <sub>2</sub> }
	2129	5-{-CON (Me) <sub>2</sub> }	4-(-OMe)
25	2130	5-{-CON (Me) 2}	4-(-0-CH; 11-N)
	2131	5-{-CON (Me) <sub>2</sub> }	4-(-NHMe)
	2132	5-{-CON (Me) <sub>2</sub> }	4-(-NHAC)
30	2133	5-{-CON (Me) <sub>2</sub> }	4- (-N-S-Ne)
	2134	4-{-CON (Me) <sub>2</sub> }	4-(-SMe)
35	2135	5-{-CON (Me) <sub>2</sub> }	4- ( P 4- S-Me)
	2136	4-{-CON (Me) <sub>2</sub> }	4- (-ŝ-He)-
40	2137	5-{-CON (Me) <sub>2</sub> }	$4 - \begin{pmatrix} 0 \\ -\frac{9}{5} - NH_2 \end{pmatrix}$
. 45	2138	5-{-CON (Me) <sub>2</sub> }	4 - { - S-N (Me), }
•	2139	5-(-OMe)	-н
	2140	5-(-OMe)	4-(-F)
50	2141	3-(-OMe)	4-(-C1)
	2142	4-(-OMe)	4-(-C1)
	2143	5-( <b>-</b> OMe)	2-(-Cl)

		•	
	2144	5-(-OMe)	3-(-Cl)
5 .	2145	6-(-OMe)	4-(-Cl)
	2146	5-(-OMe)	4-(-CN)
10	2147	5-(-OMe)	4-(-NO <sub>2</sub> )
	2148	5-(-OMe)	4-(-Me)
	2149	5-(-OMe)	. 4-(-CF <sub>3</sub> )
	2150	5-(-OMe)	4-(-Ac)
15	2151	4-(-OMe)	4- (-CO <sub>2</sub> H.)
	2152	4,5-di-(-OMe)	4- (-CO <sub>2</sub> H)
20	2153	5-(-OMe)	4-(-CO <sub>2</sub> Me)
20	2154	5-(-OMe)	4- (- <u> </u> -
	2155	5-(-OMe)	4-(-CONH <sub>2</sub> )
25	2156	5-(-OMe)	4-{-CON (Me) <sub>2</sub> }
	2157	5-(-OMe)	4-{-C (=NH) NH <sub>2</sub> }
30	2158	5-(-OMe)	4-(-OMe)
	2159	5-(-OMe)	$4-\left(-0-cH_{\frac{1}{2}},N\right)$
	2160	5-(-OMe)	4-(-NHMe)
35	2161	5-(-OMe)	4-(-NHAc)
	2162	5-(-OMe)	4- (-N-S-Me)
40	2163	5-(-OMe)	4-(-SMe)
	2164	5-(-OMe)	4 - ( - Š-Ne)
<b>45</b>	2165	5-(-OMe)	4 - (-s-We)
	2166	5-(-OMe)	4 - (-\$-NH <sub>2</sub> )
50	2167	5-(-OMe)	4 - {-\$-\(\mathbb{G}\) (Me), }
. (	2168	5-(-NHMe)	4-(-F)
		· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · ·

		·	
	2169	5-(-NHMe)	4-(-Cl)
5	2170	5- (-NHAc)	4-(-F)
	2171	5- (-NHAc)	4-(-Cl)
	2172	5- (-NHAC)	4-(-Ac)
10	2173	5- (-NHAC)	4-(-CONH <sub>2</sub> )
	2174	5- (-NHAc)	4-{-CON(Me) <sub>2</sub> }
15	2175	5- (-N-3-Ne)	4-(-F)
	2176	(-N-S-Ne)	4-(-Cl)
20	2177	5- (-N-S-We)	4-(-Me)
	2178	5 (-N-S-Me)	4-(-CF <sub>3</sub> )
25	2179	0 5- (-N-5-We)	4-(-CO <sub>2</sub> H)
30	2180	5- (-N-S-Ne)	4-(-CO <sub>2</sub> Me)
	2181	5- (-N-S-Me)	4- (-1-1-1)
35	2182	5- (-N-3-Me)	4-(-SMe)
	2183	0 - ( -N-S-Ne ) 5- ( -N - S-Ne )	4- (-s-He)
40	2184	0 	4- (-S-He)
	2185	5-(-SMe)	4-(-F)
45	2186	4-(-SMe)	4-(-Cl)
45	2187	5-(-SMe)	4-(-Me)
	2188	5-(-SMe)	4-(-CF <sub>3</sub> )
50	2189	5- (-SMe)	4-(-Ac)
	2190	5-(-SMe)	4-(-CONH <sub>2</sub> )
	2191	5- (-SMe)	4-(-CON(Me) <sub>2</sub> )

	2192	5- ( - Š-Ne ) .	4-(-F)
5	2193	4- (-\$-#e)	4-(-Cl)
	2194	5- (-\$-We)	.4-(-Me)
	2195	5- (\$-We)	4-(-CF <sub>3</sub> )
	2196	0 5- (-\$- <b>H</b> e)	4- (-Ac)
15	2197	5- (-Š-Ne)	4-(-CONH <sub>2</sub> )
	2198	5- (-Ŝ-We)	4-{-CON (Me) <sub>2</sub> }
20	2199	. (-3-Me) 5- (0	4-(-F)
25	2200	0 4 - (	4-(-C1)
	2201	(-\$- <b>u</b> e) 5 0	4-(-Me)
30	2202	(	4-(-CF <sub>3</sub> ):
	2203	(-\$-We) 5-	4-(-Ac)
35	2204	(-\$-Me) 5-	4-(-CONH <sub>2</sub> -)
	2205	(	4-{-CON (Me) <sub>2</sub> }
40	2206	5- (-\$-HH <sub>2</sub> )	4-(-F)
45	2207	0 - ( - s-nн.) 4 - 0	4-(-C1)
43	2208	4 - (-ё-нн <sub>г</sub> )	2,4-di-(-Cl)
50	2209	5- (-\$-NH <sub>2</sub> ) .	4- (-Me)
	2210	5- (-\$-NH,)	3-(-CF <sub>3</sub> )

5	2211	5- (-s-nh,)	4-(-CF <sub>3</sub> )
	2212	5- (-s-NH <sub>2</sub> )	4-(-CONH <sub>2</sub> )
10	2213	5- (-\$-NH <sub>2</sub> )	4-{-CON (Me) <sub>2</sub> }
	2214	5- (-\$-NH <sub>2</sub> )	4-(-SMe)
15	2215	5- (-\$-NH <sub>2</sub> )	4- (-S-Me)
	2216	(−;;−NH₂) 5−	4- (-S-Na)
20	2217	5- { - 9-N(Me) 2 }	4-(-F)
25	2218	4- {	4-(-C1)
	2219	. { - \$ - N(Ne), }	4-(-Me)
30	2220	5- { N(Ne), }	4-(-CF <sub>3</sub> )
	2221	{ — S — N (Me) , } 5 — 0	4-(-CONH <sub>2</sub> )
35	2222	{ − s−N (Ne), } 5− 0	4-{-CON (Me) <sub>2</sub> }
	2223	5- { - 9-N (Ne) 2 }	4-(-SMe)
40	2224	5- {-S-N(Ne), }	4 - ( - S-Ne )
45	2225	5- { - S-N (Me) , }	9 (-\$-We)
45	2226	5-{-O-(CH <sub>2</sub> ) <sub>2</sub> -OH}	4-(-C1)
	2227	5-{-O-(CH <sub>2</sub> ) <sub>3</sub> -OH}	4-(-C1)
50	2228	5- (-0^)	4-(-C1)
	2229	5- (-0 CN)	4-(-C1)

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			·
	2230	5- (-0 N-Me)	4-(-Cl)
	2231	5- (-0~N)OH)	4-(-Cl)
. 10	2232	5- ( -0 - P OH )	4-(-Cl)
45	2233	5- ( N >-OH )	, 4-(-C1)
	2234	5- ( NO OH )	4-(-Cl)
20 .	2235	5- ( NOT OH )	4-(-Cl)
25	2236	5- ( N OH )	4-(-Cl)
	2237	5- ( N CO <sub>2</sub> H )	4-(-Cl)
30	2238	O Me Ne  ( N )  S-	4-(-Cl)
35	2239	O Me Me  O Me Me  OH	4-(-Cl)
40 .	2240	5- (	4-(-Cl)
•,	2241	5- ( )	4-(-Cl)
45	2242	- 5- ( , )	4-(-Cl)
50	2243		4-(-C1)

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5 .	2244	5- ( \$\sigma_{\sigma_0}\)	4-(-C1)
10	2245	(	4-(-Cl)
	2246	5- ( NOH )	4-(-Cl)
15	2247	5-(10)	4-(-Cl)
20	2248	( کیپ ) .	4-(-C1)
	2249	5- ( III )	4-(-C1)
	2250	5- ( Jy S Ne )	4-(-C1)
30	2251	4- ( )	4-(-Cl)
35	2252	4- ( 1	4-(-Cl)
	2253	5- ( Ne N	4-(-Cl)
40	2254	5- ( N N Me )	4-(-Cl)

Table 214

	Table 214  HO <sub>2</sub> C  N  F  S  S  S  S  S  S  S  S  S  S  S  S		
5			
10		5	6 5 R
	Ex. No.	R	R'
15	2255	−H	-Н
	2256	-н	4-(-Me)
20	2257	-H	3-(-CF <sub>3</sub> )
	2258	5- (-F)	-Н
•	2259	5- (-F)	4-(-F)
25	2260	5- (-F)	4-(-Cl)
	2261	5-(-F)	4-(-Me)
:	2262	5- (-F)	4-(-CF <sub>3</sub> )
30	2263	5- (-F)	4-(-CO <sub>2</sub> H)
	2264	5-(-F)	4-(-CO₂Me)
35	2265	5-(-F)	4- (-LN)
	2266	5- (-F)	4-(-CONH <sub>2</sub> )
	2267	5-(-F)	4-{-CON(Me) <sub>2</sub> }
40 .	2268	5- (-F)	4-(-OMe)
	2269	5- (-F)	4-(-SMe.)
	2270	5- (-F)	4- (-S-Me)
45	2271	5-(-F)	4 — (
	2272	4-(-C1)	-Н
50	2273	5-(-C1)	4-(-F)
	2274	4-(-C1)	4-(-Cl)
	2275	5- (-Cl)	4-(-Me)

		·	
	2276	5-(-C1)	4-(-CF <sub>3</sub> )
5	2277	5-(-C1)·	4-(-CO <sub>2</sub> H)
	2278	5-(-C1)	4- (-CO <sub>2</sub> Me)
10	2279	5-(-Cl)	4- (-1)
	2280	5- (-C1)	4-(-CONH <sub>2</sub> )
	2281	5-(-Cl)	4-{-CON(Me) <sub>2</sub> }
15	2282	5-(-C1)	4-(-OMe)
	2283	5-(-C1)	4-(-SMe)
20	2284	5- (-C1)	4- (-S-Me)
	2285	5-(-C1)	4 - (-\$-We)
	2286	5- (-CN)	4- (-F)
25	2287	5-(-CN)	4-(-C1)
	2288	5-(-NO <sub>2</sub> )	4-(-F).
<i>30</i>	2289	5- (-NO <sub>2</sub> )	4-(-C1)
30	2290	5-(-Me)	4-(-CO <sub>2</sub> H)
	2291	5-(-Me)	4-(-CO₂Me)
35	2292	5-(-Me)	4- (-1-)
	2293	5-(-CF <sub>3</sub> )	4-(-CO <sub>2</sub> H)
	2294	5- (-CF <sub>3</sub> )	4-(-CO <sub>2</sub> Me)
40	2295	5- (-CF <sub>3</sub> )	4- ( - N )
	2296	5- (-CO <sub>2</sub> H)	4-(-F)
45	2297	4-(-CO <sub>2</sub> H)	4-(-C1)
	2298	5-(-CO <sub>2</sub> Me)	4-(-F)
	2299	5-(-CO <sub>2</sub> Me)	4-(-C1)
50	2300	5- (-Ac)	4-(-F)
	2301	5- (-Ac)	. 4-(-Cl)

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	2302	5- ()	-н
	2303	5- ( )	4-(-F)
	2304	4- ( -N )	4-(-Cl)
	2305	5- ( <del>_</del> N )	4-(-CN)
	2306	<sub>5-</sub> ( - N )	4-(-NO <sub>2</sub> )
	2307	5- (	4-(-Me)
	2308	5- (-1-)	4-(-CF <sub>3</sub> )
	2309	<sub>5-</sub> (	4-(-Ac)
	2310	<sub>5-</sub> ( ¬ )	4-(-CO₂H)
	2311	5-()	4-(-CO₂Me)
٠.	2312	<sub>5-</sub> ( ÎN)	4-(
	2313	5- (-1-1-)	4-(-CONH <sub>2</sub> )
. •	2314	5- ( <del> </del>   )	4-{-CON (Me) 2}
	2315	5- ( - )	4-{-C(=NH)NH <sub>2</sub> }
	2316	5- ( <del>"</del> N )	4-(-OMe)
	2317	5-(-1)	4-(-0-cH <sub>2</sub> N )
	2318	5- ( -N)	4-(-NHMe)
	2319	- ( - ( - N ) )	4-(-NHAc)
•	2320	5- ( <del> </del> N )	(-N-S-Ne) 4-
•			

		•	
5	2321	5- ( <del> </del> N )	4-(-SMe)
•	2322	5 (	4 - ( 0 - S-Ne )
10	2323	<sub>5-</sub> ( - <sup>1</sup> / <sub>-</sub> N \ )	4- (-5-We)
	2324	5- (-1-)	4 – (-\$-NH <sub>2</sub> )
15	2325	5- ( -N)	$\left\{ \begin{array}{c} 0 \\ -\ddot{S} - N \text{ (Me)}_{2} \end{array} \right\}$
	2326	5- (-CONH <sub>2</sub> )	-Н
20	2327	5- (-CONH <sub>2</sub> )	. 4-(-F):
20	2328	4- (-CONH <sub>2</sub> )	4-(-C1)
	2329	5- (-CONH <sub>2</sub> )	4-(-CN)
25	2330	5- (-CONH <sub>2</sub> )	$4 - (-NO_2)$
	2331	5- (-CONH <sub>2</sub> )	4-(-Me)
	2332	5- (-CONH <sub>2</sub> )	4-(-CF <sub>3</sub> )
30	2333.	5- (-CONH <sub>2</sub> )	4-(-Ac)
	2334	5- (-CONH <sub>2</sub> )	4- (-CO <sub>2</sub> H)
	2335	5- (-CONH <sub>2</sub> )	4-(-CO <sub>2</sub> Me)
35	2336	5- (-CONH <sub>2</sub> )	4- ( - N )
	2337	5-(-CONH <sub>2</sub> )	4-(-CONH <sub>2</sub> )
40	2338	5- (-CONH <sub>2</sub> )	4-{-CON(Me) <sub>2</sub> }
	2339	5- (-CONH <sub>2</sub> )	4-(-C(=NH)NH <sub>2</sub> }
	2340	5- (-CONH <sub>2</sub> )	4-(-OMe)
45	2341	5- (-CONH <sub>2</sub> )	4-(-0-CH <sub>2</sub> N )
	2342	5-(-CONH <sub>2</sub> )	4-(-NHMe)
50	2343	5- (-CONH <sub>2</sub> )	4-(-NHAc)
	2344	5- (-CONH <sub>2</sub> )	4 - (-N-Ş-Me)
	2345	5-(-CONH <sub>2</sub> )	4-(-SMe)
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	2346	5- (-CONH <sub>2</sub> )	4- (
5	2347	5- (-CONH <sub>2</sub> )	4- (-s-Me)
10	2348	5- (-CONH <sub>2</sub> )	4 – (-5-NK,)
٠	2349	5- (-CONH <sub>2</sub> )	4- {-\$-N(Me), }
15	2350	5-{-CON(Me) <sub>2</sub> }	-н
	2351	5-{-CON(Me) <sub>2</sub> }	4-(-F)
	2352	4-{-CON(Me) <sub>2</sub> }	4-(-Cl)
20	2353	5-{-CON(Me) <sub>2</sub> }	4-(-CN)
	2354	5-{-CON(Me) <sub>2</sub> }	4-(-NO <sub>2</sub> )
25	2355	5-{-CON(Me) <sub>2</sub> }	4-(-Me)
	2356	5-{-CON(Me) <sub>2</sub> }	4-(-CF <sub>3</sub> )
·	2357	5-{-CON(Me) <sub>2</sub> }	4-(-Ac)
30	2358	5-{-CON (Me) <sub>2</sub> }	4-(-CO <sub>2</sub> H)
	2359	5-{-CON(Me) <sub>2</sub> }	4-(-CO <sub>2</sub> Me)
	2360	5-{-CON(Me) <sub>2</sub> }	4- (-9-11
35	2361	5-{-CON(Me) <sub>2</sub> }	4-(-CONH <sub>2</sub> )
	2362	5-(-CON(Me) <sub>2</sub> }	4-{-CON (Me) <sub>2</sub> }
40 .	2363	5-{-CON(Me) <sub>2</sub> }	4-{-C(=NH)NH <sub>2</sub> }
40	2364	5-{-CON(Me) <sub>2</sub> }	4-(-OMe)
	2365	5-(-CON (Me) <sub>2</sub> )	4-(-0-cH;   N )
45	2366	5-{-CON (Me) <sub>2</sub> }	4-(-NHMe)
	2367	5-{-CON(Me) <sub>2</sub> }	4-(-NHAc)
50	2368	5- (-CON (Me) <sub>2</sub> )	4- (-N-5-He)
	2369	5-{-CON (Me) <sub>2</sub> }	4-(-SMe)

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			<u> </u>
5	2370	5-{-CON (Me) <sub>2</sub> }	4 - ( - Š-Ne)
•	2371	5-{-CON (Me) <sub>2</sub> }	4- (-5-Ne)
10	2372	5-{-CON (Me) <sub>2</sub> }	4 - (-s-NH <sub>2</sub> )
	2373	5-{-CON (Me) <sub>2</sub> }	4 - { - S - N (Me) <sub>2</sub> }
15	2374	. 5-(-OMe)	-Н .
	2375	5-(-OMe)	4-(-F)
20	2376	5-(-OMe)	4-(-Cl)
	2377	5-(-OMe)	4-(-CN)
	2378	5-(-OMe)	4-(-NO <sub>2</sub> )
25	2379	5-(-OMe)	4-(-Me)
	2380	5-(-OMe)	4-(-CF <sub>3</sub> )
•	2381	5-(-OMe)	4-(-Ac)
30	2382	5-(-OMe)	4-(-CO <sub>2</sub> H)
	2383	5- (-OMe)	4-(-CO <sub>2</sub> Me)
35	2384	5-(-0Me)	4- ( - N )
••	2385	5-(-OMe)	4-(-CONH <sub>2</sub> )
	2386	5-(-OMe)	4-{-CON (Me) <sub>2</sub> }
40	2387	5-(-OMe)	4-{-C (=NH) NH <sub>2</sub> }
	2388	5-(-OMe)	4-(-OMe)
	2389	5-(-OMe)	4-(-0-CH <sub>2</sub> -N) ^
45	2390	5-(-OMe)	4-(-NHMe).
	2391	5-(-OMe)	4-(-NHAc)
50	2392	5-(-OMe)	4- (-N-S-Ne)
	2393	5-(-OMe)	4-(-SMe)

	2394	5-(-OMe)	4 - (-s-ite)
5	2395	5-(-OMe)	4 - (
10	2396	5-(-OMe)	4 - (-5-NH,)
	2397	5-(-OMe)	- {
15	2398	5-(-NHMe)	4-(-F)
	2399	5-(-NHMe)	4-(-Cl)
	2400	5- (-NHAC)	4-(-F)
20	2401	5-(-NHAC)	4-(-C1)
	2402	5- (-NHAC)	4-(-Ac)
	2403	5- (-NHAc)	4-(-CONH <sub>2</sub> )
25	2404	5- (-NHAC)	4-{-CON (Me) <sub>2</sub> }
	2405	(-N-S-Me)	4-(-F)
30	2406	5- (-N-S-Ne)	4-(-C1)
	2407	(-N-S-Me)	4-(-Me)
35	2408	0 (-N-S-We) 5-	4-(-CF <sub>3</sub> )
40	2409	(-N-2-46) 5-	4-(-CO₂H)
	2410	(-N-S-Ne) 5-	4-(-CO₂Me)
45	2411	5- (-N-S-Me)	4- ( - ( - N )
	2412	0 (и-s-не) 5-	4-(-SMe)
50	2413	0 (-N-5-Me) 5-	4 - ( - S-He )
	2414	0 (-N-S-We) 5-	(-S-We)
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	2415	5-(-SMe)	4-(-F)
5	2416	5-(-SMe)	4-(-Cl)
	2417	5- (-SMe)	4-(-Me)
	2418	5- (-SMe)	4-(-CF <sub>3</sub> )
10	2419	5-(-SMe)	4-(-Ac)
	2420	5- (-SMe)	4-(-CONH <sub>2</sub> )
	2421	5- (-SMe)	4-{-CON (Me) 2}
15	2422	5 (	4-(-F)
20	2423	5- (-ŝ-Me)	4-(-C1)·
20	2424	5- (-Ŝ-Ne)	4-(-Me)
25	2425	5- (-Š-Ne)	4-(-CF <sub>3</sub> )
25	2426	0 5- (	4-(-Ac)
	2427	$5-\begin{pmatrix}0\\-\ddot{s}-\dot{s}\dot{e}\end{pmatrix}$	4-(-CONH <sub>2</sub> )
30	2428	(	4-{-CON (Me) <sub>2</sub> }
. 35	2429	(-3-Ne) 5	4-(-F)
	2430	0 - (	4-(-C1)
40	2431	5- (-8-Ne)	4-(-Me)
	2432	0 (	4-(-CF <sub>3</sub> )
45	2433	5- (-5-Ne)	4-(-Ac)
	2434	5 ( −; − <b>¼</b> e )	4-(-CONH <sub>2</sub> )
50	2435	5- (-\$-Me)	4-{-CON(Me) <sub>2</sub> }
	2436	. (- s - мн, ) 5- 0	4-(-F)
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5	2437	(	4-(-Cl)
	2438	0 (-s-NH <sub>2</sub> ) 5-	4-(-Me)
10	2439	(	4-(-CF <sub>3</sub> )
	2440	. (-s-nh.) 5-	. 4-(-CONH <sub>2</sub> )
15	2441	5- (-5-NH <sub>2</sub> )	4-{-CON(Me) <sub>2</sub> }
	2442	. (	4-(-SMe)
20	2443	5- (-\$-NH <sub>2</sub> )	4- (-S-Me)
25	2444	(-s-NH <sub>2</sub> )	(
-	2445	5- (-S-N(Me), }	4-(-F)
30	2446	5- { 0 - N(Me); }	4-(-Cl)
	2447	{ —	4-(-Me)
35	2448	{ − ; − N(Me), } 5 − 0	4-(-CF <sub>3</sub> )
	2449	5 − { −	4-(-CONH <sub>2</sub> )
40	2450	{ − \$ − N (Ne), } 5 − 0	4-{-CON (Me) <sub>2</sub> }
45	2451	{ - \$ - N (Me), }	4-(-SMe)
10	2452	{ −\$−N (Me), } 5−	4- (-S-Ne)
50	2453	5- {-\$\begin{align*} \begin{align*}	4 (-5-Ne)

Table 215

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Table 215			
HO <sub>2</sub> C N 0 2 3 4 5 5 R'			
Ex. No.	R	R'	
2454	2-(-F)	2-(-F)	
2455	2-(-F)	3-(-F)	
2456	2-(-F)	4-(-F)	
2457	3-(-C1)	3-(-C1)	
2458	3,5-di-(-Cl)	3,5-di-(-Cl)	
2459	3-(-CN)	3- (-CN)	
2460	3- (-NO <sub>2</sub> )	3-(-NO <sub>2</sub> )	
2461	3- (-Me)	3-(-Me)	
2462	3-(-CF <sub>3</sub> )	3-(-CF <sub>3</sub> )	
2463	3-(-Ac)	3- (-Ac)	
2464	. 3-(-CO <sub>2</sub> H)	3- (-CO <sub>2</sub> H).	
2465	3-(-CO₂Me)	3- (-CO <sub>2</sub> Me)	
2466	3-(	3- ( - N )	
2467	3-(-CONH <sub>2</sub> )	3-(-CONH <sub>2</sub> )	
2468	3-(-CONH <sub>2</sub> )	3-(-F)	
2469	3-(-CONH <sub>2</sub> )	. 3-(-Cl)	
2470	3-{-CON(Me) <sub>2</sub> }	3-{-CON (Me) <sub>2</sub> }.	
2471	3-{-CON(Me) <sub>2</sub> }	3-(-F)	
2472	3-(-CON(Me) <sub>2</sub> )	. 3-(-C1)	
2473	3-{-C(=NH)NH <sub>2</sub> }	3-{-C (=NH) NH <sub>2</sub> }	
2474	. 3-(-OMe)	3- (-OMe)	
2475	$3-\left(-0-\operatorname{CH}_{\frac{1}{0}}-\operatorname{N}\right)$	3-(-0-CH <sub>z</sub> N )	

2476	3-(-NHMe)	3-(-NHMe)
2477	3-(-NHAc) .	3-(-NHAc)
2478	(-N-S-Me)	3- (-N-3-Ne)
2479	. 3-(-SMe)	3-(-SMe)
2480	3- (-ÿ-Me)	3- ( - S-Ne )
2481	3- (-2-Me)	3- (
2482	3- (-ё-нн <sub>2</sub> )	3- (-š-NH²)
2483	3- {-\$\bar{0}{-\$\bar{0}{N (Me)},}}	3- { - S-N (Ne), }
2484	3- (-F)	4-(-F)
2485	3-(-C1)	. 4-(-C1)
2486	4-(-CN)	4- (-CN)
2487	4-(-NO <sub>2</sub> )	4-(-NO <sub>2</sub> )
2488	3-(-Me)	4- (-Me)
2489	4-(-Me)	2,6-di-(-Me)
2490	4-(-CF <sub>3</sub> )	.4-(-CF <sub>3</sub> )
2491	4-(-Ac)	4- (-Ac)
2492	4-(-CO <sub>2</sub> H)	4-(-CO <sub>2</sub> H)
2493	4-(-CO <sub>2</sub> Me)	4-(-CO₂Me)
2494	4- ( - N )	4- ( <del> </del>     )
2495	4-(-CONH <sub>2</sub> )	4-(-CONH <sub>2</sub> )
2496	4-(-CONH <sub>2</sub> )	4-(-F)
2497	4-(-CONH <sub>2</sub> )	2,3,4,5,6-penta-(-F)
2498	4-(-CONH <sub>2</sub> )	4-(-Cl)
2499	4-{-CON (Me) <sub>2</sub> }	4-{-CON (Me) <sub>2</sub> }
2500	· 4-{-CON(Me) <sub>2</sub> }	. 4-(-F)
2501	4-(-CON (Me) <sub>2</sub> )	4-(-C1)

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	2502	$4-\{-CON(Me)_2\}$	3,5-di-(-Cl)
5	2503	4-(-C (=NH) NH <sub>2</sub> )	4-{-C(=NH)NH <sub>2</sub> }
	2504	4-(-OMe)	4-(-OMe)
	2505	4-(-OMe)	3,4,5-tri-(-OMe)
10	2506	4-(-0-CH, -N )	4-(-0-CH <sub>2</sub> N )
	2507	4-(-NHMe)	4-(-NHMe)
. 15	2508	4- (-NHAC)	4-(-NHAc)
	2509	4- (-N-S-Me)	4- (-N-S-Nc)
20	2510	4-(-SMe)	4-(-SMe)
	2511	4 - ( - S-Ne )	4- (-š-We)
25	2512	$4-\begin{pmatrix}0\\-\ddot{S}-\dot{M}e\\0\end{pmatrix}$	4- (-5-Me)
	2513	(- ° - мн <sub>2</sub> ) 4 - ( ° - мн <sub>2</sub> )	$4-\begin{pmatrix}0\\-5\\-NH_2\end{pmatrix}$
30	2514	4 - { - 9 - N (Ne) , }	$4-\left\{ egin{array}{c} 0\\ -\ddot{\mathbf{S}}-\mathbf{N}\left(\mathbf{Me} ight)_{2} \end{array}  ight\}$

Table 216

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HO <sub>2</sub> C N F O 2 3 4 5 5 R.				
Ex.	R	R'		
2515	-Н	-н		
2516	2-(-F)	3-(-F)		
2517	3-(-Cl)	3-(-C1)		
2518	3-(-CN)	3-(-CN)		
2519	3-(-NO <sub>2</sub> )	3-(-NO <sub>2</sub> )		
2520	3- (-Me)	3-(-Me)		
2521	3-(-CF <sub>3</sub> )	3-(-CF <sub>3</sub> )		
2522	3- (-Ac)	3- (-Ac)		
2523	3-(-CO <sub>2</sub> H)	3- (-CO <sub>2</sub> H)		
2524	3-(-CO <sub>2</sub> Me)	3-(-CO <sub>2</sub> Me)		
2525	3-(-1-)	3- (-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-		
2526	3-(-CONH <sub>2</sub> )	3- (-CONH <sub>2</sub> )		
2527	3- (-CONH <sub>2</sub> )	3-(-F)		
2528	3- (-CONH <sub>2</sub> )	3-(-Cl)		
2529	3-{-CON (Me) <sub>2</sub> }	3-{-CON(Me) <sub>2</sub> }		
2530	3-{-CON (Me) <sub>2</sub> }	3-(-F)		
2531	3-{-CON (Me) <sub>2</sub> }	3-(-Cl)		
2532	3-(-C(=NH)NH <sub>2</sub> )	3-(-C (=NH) NH <sub>2</sub> )		
2533	3-(-OMe)	3-(-OMe)		
2534	$3-\left(-0-\operatorname{cH}_{2}^{0}-\operatorname{N}\right)$	3-(-0-cH-1-N)		
2535	3-(-NHMe)	3-(-NHMe)		
2536	3-(-NHAc)	3-(-NHAC)		

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5	2537	3- (-N-S-Me)	3- (-M-S-Me)
	2538	3-(-SMe)	3-(-SMe)
	2539	3- (-s-Me)	3- (-s-He)
10	2540	3- (-\$-Me)	3- (-s-we)
15	2541	3- (	3- (-\$-NH <sub>2</sub> )
	2542	3- {-9-N (Ne) <sub>2</sub> }	3- { - 5-N(Ne), }
	2543	3-(-F)	4-(-F)
20	2544	4-(-Cl)	4-(-C1)
	2545	4-(-CN)	4-(-CN)
25	2546	4-(-NO <sub>2</sub> )	4-(-NO <sub>2</sub> )
25	2547	4-(-Me)	4-(-Me)
	2548	4-(-CF <sub>3</sub> )	4-(-CF <sub>3</sub> ).
30	2549	4-(-Ac)	4- (-Ac)
	2550	3- (-CO <sub>2</sub> H)	4-(-CO <sub>2</sub> H)
	2551	4-(-CO₂Me)	4-(-CO <sub>2</sub> Me)
35 .	2552	4- ( - N )	4-(-1-1)
	2553	4-(-CONH <sub>2</sub> )	4-(-CONH <sub>2</sub> )
	2554	4-(-CONH <sub>2</sub> )	4-(-F)
40	2555	4-(-CONH <sub>2</sub> )	4-(-C1)
·	2556	3-{-CON(Me)'2}	4-{-CON(Me) <sub>2</sub> }
A.E.	2557	3-{-CON(Me) <sub>2</sub> }	4-(-F)
<b>45</b>	2558	4-{-CON(Me) <sub>2</sub> }	4-(-C1)
	2559	4-{-C(=NH)NH <sub>2</sub> }	4-{-C(=NH)NH <sub>2</sub> }
50	2560	4-(-OMe)	4-(-OMe)
 ·	2561	4-(-0-CH <sub>2</sub> -N)	4-(-0-cH2-N)

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		•	
	2562	4-(-NHMe)	4-(-NHMe)
5	2563	4-(-NHAC)	4-(-NHAC)
	2564	(-N-S-He)	(-N-S-Ne)
10	2565	4-(-SMe)	4-(-SMe)
	2566	4- (-s-we)	4 - ( - S - Ne )
15	2567	4 - (-5-Ne)	(
	2568	4- (	4 - (-\$ -NH <sub>2</sub> )
20	2569	{ N (He) , }	

Table 217

5	

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Table 218

	. Table 218		
5		HO <sub>2</sub> C N P O 2	3 \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
10			Py: Pyridyl group
	Ex.	Ру	R'
15	2591	3-Py	-Н
	2592	3-Py	3-(-F)
	2593	3-Py	3-(-Cl)
20	2594	3-Py	3-(-Me)
	2595	3-Py	3-(-CF <sub>3</sub> )
	2596	3-Py	3- (-Ac)
25	2597	3-Py	3- (-CO <sub>2</sub> H).
	2598	3-Py	3- (-CO <sub>2</sub> Me)
30	2599	3-Py	3- ( <del>  N</del> )
	2600	3-Py	3- (-CONH <sub>2</sub> )
	2601	3-Py	3-{-CON (Me) ;}
35	2602	3-Py	4-(-F)
	2603	3-Py	4-(-Cl)
•	2604	3-Py	4-(-Me)
40	2605	3-Py	4-(-CF <sub>3</sub> )
	2606	3-Py	4-(-Ac)
	2607	3-Py	4- (-CO <sub>2</sub> H)
45	2608	3-Py	4-(-CO₂Me)_
	2609	3-Ру	4- ( ♣\\
50	2610	3-Py	4-(-CONH <sub>2</sub> )

3-Py

2611

55

4-{-CON (Me)<sub>2</sub>}

Table 219

Example No.	328   1H NMR(δ) ppm
HCI CI HO N N N N N N N N N N N N N N N N N N	300MHz, DMSO-d6 8. 29 (1H, s), 8. 23 (1H, d, J=9. 0 Hz), 8. 02 (1H, d, J=8. 4Hz), 7. 8 0 (1H, s), 7. 71 (2H, d, J=8. 4Hz) , 7. 61 (1H, d, J=9. 3Hz), 7. 55-7 . 45 (3H, m), 7. 46 (2H, d, J=8. 1H z), 7. 22 (2H, d, J=8. 7Hz), 5. 16 (2H, s,), 4. 34 (1H, m), 4. 20-3. 40 (4H, m), 2. 60-2. 15 (6H, m), 2 . 10-1. 90 (2H, m), 1. 85-1. 70 (2 H, m), 1. 65-1. 55 (1H, m), 1. 50-
Purity >90% (NN	1. 10 (3H, m)
MS 662 (M+1)	

Example No.	329	1H NMR(δ) ppm
HO HCI CI	ОН	400MHz, DMSO-d6 9.80(1H, brs), 8.32(1H, s), 8.3 0(1H, d, J=8.8Hz), 8.06(1H, d, J =8.8Hz), 7.74(2H, d, J=8.6Hz), 7.48-7.37(4H, m), 7.22(1H, d, J =8.6Hz), 7.17(1H, d, J=8.2Hz), 7.05(1H, d, J=2.3Hz), 6.88(1H, dd, J=8.3, 2.5Hz), 5.04(2H, s), 4.37(1H, m), 2.37-2.22(2H, m), 2.11-1.98(2H, m), 1.93-1.81(2H, m), 1.70-1.58(1H, m), 1.56-1
Purity >90% (NM)	R)	. 22 (3H, m)
MS 553 (M+1)		

Example No.	330	1H NMR(δ) ppm
HCI CI N		300MHz, DMSO-d6 8. 38 (1H, d, J=7. 5Hz), 8. 32 (1H, s), 8. 29 (1H, d, J=9. 0Hz), 8. 16 (1H, s), 8. 05 (1H, d, J=9. 0Hz), 7. 96 (1H, d, J=7. 5Hz), 7. 75 (2H, d, J=8. 4Hz), 7. 53-7. 43 (5H, m), 7. 25 (2H, d, J=8. 4Hz), 5. 13 (2H, s), 4. 36 (1H, m), 4. 12 (1H, sept, J=6. 9Hz), 2. 40-2. 15 (2H, m), 2. 10 -1. 95 (2H, m), 1. 90-1. 75 (2H, m), 1. 70-1. 55 (1H, m), 1. 50-1. 20 (1H, s)
Purity >90% (NM	IR)	3H, m), 1. 18 (6H, d, J=6. 6Hz)
MS 622 (M+1)		1

Table 220

Example No.	. 331	lH NMR(δ) ppm
HCI N CO		300MHz, DMSO-d6 8. 31 (1H, s), 8. 27 (1H, d, J=8. 7I z), 8. 05 (1H, d, J=8. 7Hz), 7. 75- 7. 41 (9H, m), 7. 23 (2H, d, J=8. 7I z), 4. 36 (1H, m), 4. 00-3. 90 (1H, m), 2. 84 (3H, brs), 2. 40-2. 15 (2 H, m), 2. 10-2. 00 (2H, m), 1. 95-1 . 75 (2H, m), 1. 70-1. 55 (1H, m), 1 . 50-1. 00 (7H, m)
Purity >90%	(NMR)	
		-1

Example No.	332	lH NMR(δ) ppm
HO HCI	CI H	300MHz, DMSO-d6 10. 42 (1H, s), 8. 29 (1H, s), 8. 27 (1H, s), 8. 10 (1H, d, J=7. 9Hz), 8 .03 (1H, d, J=8. 6Hz), 7. 82 (2H, d , J=7. 5Hz), 7. 73 (2H, d, J=8. 7Hz ), 7. 56-7. 52 (5H, m), 7. 38 (2H, t , J=7. 9Hz), 7. 26 (2H, d, J=8. 7Hz ), 7. 13 (1H, t, J=7. 5Hz), 5. 20 (2 H, s), 4. 35 (1H, br t, J=11. 7Hz), 2. 37-2. 19 (2H, m) , 2. 07-1. 96 (2H, m), 1. 92-1. 79 (2H, m), 1. 69-1. 58 (1H, m), 1. 50-
Purity > 9 0	% (NMR)	1. 20 (3H, m)
MS 6	56 (M+1)	

Example No.	333	1H NMR(δ) ppm
HCI CI N N N N N N N N N N N N N N N N N	-n	300MHz, DMSO-d6 8. 30(1H, s), 8. 24and8. 03(2H, A Bq, J=8. 8Hz), 7. 71and7. 22(4H, A'B'q, J=8. 8Hz), 7. 69(1H, s), 7 . 52(4H, s), 7. 50and7. 43(2H, A" B"q, J=7. 7Hz), 5. 15(2H, s)4. 35 (1H, br t, J=12. 1Hz), 4. 05-3. 15(5H, br m), 3. 27(3H, s), 2. 39-2. 20(2H, m), 2. 07-1. 75(6H, m), 1. 70-1. 5 8(1H, m) 1. 55-1. 20(5H, m)
Purity > 9 0% (NM	R)	
MS 678 (M+1)		

Table 221

Example	No.		334	IH NMR(δ) ppm
но	CI N O		ОН	300MHz, DMSO-d6 8. 22(1H, d, J=1.5Hz), 8. 01(1H, d, J=9.0Hz), 7. 89(1H, dd, J=8.6 1.5Hz), 7. 61(2H, d, J=8.6Hz), 7. 50-7. 39(4H, m), 7. 27(1H, d, J=8.6Hz), 7. 22(1H, d, J=2.6Hz), 7. 13(2H, d, J=8.6Hz), 7. 04(1H, dd, J=8.2, 2.6Hz), 5. 04(2H, s), 4. 28(1H, m), 4. 11(2H, t, J=6.3Hz), 3. 57(2H, t, J=6.3Hz), 2. 38-2. 17(2H, m), 2. 00-1. 79(6H, m),
Purity	>90%	(NMR)		1.70-1.59(1H, m), 1.52-1.16(3 H, m)
MS	611	(M+1)		

Example No.

335

IH NMR(δ) ppm

300MHz, DMS0-d6

8. 30(1H, d, J=1.5Hz), 8. 27(1H, d, J=9.0Hz), 8. 04(1H, dd, J=8.6)

1. 5Hz), 7. 72(2H, d, J=9.0Hz), 7. 60-7. 40(4H, m), 7. 32-7. 19(4H, m), 7. 06(1H, dd, J=8.6, 3.0Hz), 5. 08(2H, s), 4. 36(1H, m), 4. 06(2H, t, J=4.8Hz), 2. 38-2. 19(2H, m), 2. 13-1.97(2H, m), 1. 94-1. 78(2H, m), 1. 72-1. 59(1H, m), 1. 52-1. 20(3H, m)

MS

597(M+1)

Table 222

Ex. No.	HCV polymerase inhibitory activity IC <sub>50</sub> [μM]	Ex. No.	HCV polymerase inhibitory activity IC <sub>50</sub> [μΜ]
340	0.017	360	0.014
341	0.025	361	0.028
342	0.015	362	0.020
343	0.017	363	0.11
344	0.016	364	0.12
345	0.012	365	0.020
346	0.025	366	0.024
347	0.022	367	0.011
348	0.013	368	0.024

Table 222 (continued)

Ex. No.	HCV polymerase inhibitory activity IC <sub>50</sub> [μΜ]	Ex. No.	HCV polymerase inhibitory activity IC <sub>50</sub> [μM]
349	0.021	369	0.022
350	0.020	370	0.017
351	0.019	371	0.015
352	0.013	372	0.033
353	0.023	373	0.013
354	0.013	374	0.013
355	0.015	375	0.012
356	0.016	376	0.014
357	0.019	377	0.012
358	0.017	378	0.018
359	0.015	379	0.021

Table 223

Ex. No.	HCV polymerase inhibitory activity IC <sub>50</sub> [μΜ]	Ex. No.	HCV polymerase inhibitory activity IC <sub>50</sub> [μΜ]
380	0.023	409	0.020
381	0.011	410	0.018
382	0.015	411	0.015
383	0.013	412	0.019
384	0.016	413	0.026
385	0.019	414	0.024
386	0.018	415	0.019
387	0.025	416	0.024
388	0.020	417	0.029
389	0.012	418	0.016
390	0.014	419	0.021
391	0.017	420	0.015
392	0.014	421	0.017
393	0.011	422	0.017
394	0.019	423	0.017
395	0.016	424	0.020
396	0.025	425	0.026
397	0.037	426	0.053
398	0.077	427	0.020
399	0.032	428	0.026

Table 224

Ex. No.	HCV polymerase inhibitory activity IC <sub>50</sub> [μΜ]	Ex. No.	HCV polymerase inhibitory activity IC <sub>50</sub> [μΜ]
429	0.017	455	0.015

Table 224 (continued)

	Ex. No.	HCV polymerase inhibitory activity IC <sub>50</sub> [μΜ]	Ex. No.	HCV polymerase inhibitory activity IC <sub>50</sub> [μΜ]
_	430	0.017	456	0.017
5	431	0.015	457	0.015
	432	0. 022	458	0. 015
	433	0.014	459	0.014
10	434	0.011	460	0.017
	435	0.012	461	0.021
	436	0. 026	462	0. 028
15	440	0. 070	463	0. 026
15	442	0.024	464	0.030
	443	0. 030	465	0.033
	445	0.33	466	0.023
20	446	0.016	467	0.032
	447	0.12	468	0.028
	448	0.20	469	0.024
25	449	0. 025	502	0. 024
~~	450	0.040	503	0. 196
	451	0.031	601	0.32
	452	0.028	701	0.052
30	454	0.013		

10 .

Table 225

Example No.	341	1H NMR(δ) ppm
HCI CI,		300MHz, DMSO-d6 8. 29 (1H, d, J=1. 5Hz), 8. 25 (1H, d, J=8. 7Hz), 8. 03 (1H, dd, J=8. 7Hz), 7. 72and7. 22 (4H, Abq, J=8. 8Hz), 7. 67 (1H, d, J=1. 5Hz), 7. 52 (4H, s), 7. 49 (1H, dd, J=7. 9, 1. 5Hz), 7. 43 (1H, d, J=7. 9Hz), 4. 46 (1H, brs), 4. 35 (1H, brt, J=12. 4Hz), 3. 62 (1H, brs), 3. 06 (1H, brs), 2. 79 (1H, brs), 2. 38-2. 20 (2H, brm), 2. 08-1. 81
Purity > 9 0 %	(NMR)	(4H, brm), 1.77-1.52(4H, brm), 1.46-1.20(3H, brm), 1.19-1. 00(2H, brm), 0.94and0.92(tot
MS . 662 (	M+1)	al3H, each s)

Example	No.	342	lH NMR(δ) ppm
но	HCI	CI	300Mz, DMSO-d6 8. 28 (1H, d, J=1.5Hz), 8. 26 (1H, d, J=1.8Hz), 8. 19 (1H, d, J=8.8Hz), 8. 07 (1H, dd, J=8.8, 1.5Hz), 7. 7 0and7. 22 (4H, Abq, J=8.8Hz), 7. 56-7. 50 (1H, m), 7. 56 (4H, s), 5. 17 (2H, s), 4. 33 (1H, brt, J=12.5 Hz), 2. 05 (3H, s), 2. 37-2. 20 (2H, brm), 2. 06-1. 80 (4H, brm), 1. 7 0-1. 60 (1H, brm), 1. 50-1. 20 (3H
Purity	>90%	(NMR)	, brm)
MS	679	(M+1)	

Example No.	343	1H NMR(δ) ppm
HO N	CI 	300MHz, DMSO-d6 8. 20(1H, d, J=1. 5Hz), 7. 93(1H, d, J=8. 6Hz), 7. 84(1H, dd, J=8. 3 Hz, 1. 5Hz), 7. 57(2H, d, J=8. 6Hz), 7. 50-7. 40(4H, m), 7. 27(1H, d, J=8. 2Hz), 7. 22(1H, d, J=2. 6Hz), 7. 10(2H, d, J=8. 6Hz), 7. 01(1H, dd, J=8. 6Hz, 2. 6Hz), 5. 02(2H, s), 4. 89(2H, s), 4. 78(1H, d, J=4. 1Hz), 4. 38-4. 18(1H, m), 3. 96-3. 81(1H, m), 3. 78-3. 62(2H, m),
Purity >	90% (NMR)	3. 27-2. 99 (2H, m), 2. 35-1. 15 (1 4H, m)
MS	694 (M+1)	

. 5

Table 226

Example No.	344 1H NMR(δ) ppm
HCI CI	300MHz, DMSO-d6 8. 30 (1H, s), 8. 23 (1H, d, J=8. 7H z), 8. 02 (1H, d, J=8. 4Hz), 7. 71 ( 2H, d, J=8. 7Hz), 7. 55-7. 15 (8H, m), 7. 07 (1H, dd, J=8. 4Hz, 3. 0Hz ), 5. 07 (2H, s), 4. 35 (1H, m), 4. 1 7 (2H, t, J=4. 5Hz), 3. 69 (2H, t, J =4. 5Hz), 3. 32 (3H, s), 2. 40-2. 1 5 (2H, m), 2. 10-1. 80 (4H, m), 1. 7 5-1. 60 (1H, m), 1. 50-1. 20 (3H, m )
Purity > 90% (N	MR)
MS 611 (M+1	

. <del></del>		<del></del>	<del></del>
Example No.	3-	45	1H NMR(δ) ppm
HCI HO N		0-	300MHz, DMSO-d6 8. 29 (1H, d, J=1. 5Hz), 8. 22 (1H, d, J=8. 7Hz), 8. 01 (1H, d, J=8. 7Hz), 7. 50-7. 15 (8H, m), 7. 07 (1H, dd, J=8. 4 Hz, 2. 4Hz), 5. 07 (2H, s), 4. 35 (1 H, m), 4. 17 (2H, t, J=4. 2Hz), 3. 7 6 (2H, t, J=4. 5Hz), 3. 65-3. 40 (4 H, m), 3. 25 (3H, s), 2. 40-2. 20 (2 H, m), 2. 10-1. 80 (4H, m), 1. 75-1 .65 (1H, m), 1. 65-1. 20 (3H, m)
Purity > 9	90%. (NMR)		
MS	655 (M+1)		

Example No.	346	1H NMR(δ) ppm
HO N CI	<u></u>	300Mz, DMSO-d6 8. 26(1H, d, J=1. 9Hz), 8. 23(1H, d, J=1. 5Hz), 8. 08-8. 02(2H, m), 7. 91(1H, dd, J=8. 7, 1. 5Hz), 7. 6 3and7. 16(4H, Abq, J=8. 9Hz), 7. 56-7. 51(5H, m), 5. 15(2H, s), 4. 29(1H, brt, J=11. 7Hz), 2. 96(2H, d, J=6. 9Hz), 2. 37-2. 12(3H, m), 2. 00-1. 79(4H, brm), 1. 71-1. 6 0(1H, brm), 1. 49-1. 19(3H, brm), 0. 97and0. 95(total6H, each s)
Purity > 90% (NM	IR)	
MS 621 (M+1)		

	Tab	le 227	
5	Example No.	347	1H NMR(δ) ppm
10	HO N O	N N S	300Mz, DMSO-d6 8. 26(1H, s), 8. 22(1H, s), 8. 06(1H, s), 8. 05(1H, d, J=8. 0Hz), 7. 94and7. 85(2H, ABq, J=8. 8Hz), 7. 59and7. 15(4H, A'B'q, J=8. 6Hz), 7. 52(4H, s), 7. 44(1H, d, J=8. 0Hz), 5. 12(2H, s), 4. 27(1H, brt, J=11. 4Hz), 2. 38-2. 18(2H, brm), 1. 70-1. 59(1H, brm), 1. 49-1. 17(3H, brm)
	Purity >90% (NMR)	)	
20	MS 634 (M+1)		
25	Example No.	348	1H NMR(δ) ppm 300MHz, DMSO-d6 8.32(1H, s), 8.29(1H, d, J=9.0H z), 8.06(1H, d, J=8.7Hz), 7.74( 2H, d, J=9.0Hz), 7.72(1H, brs),
30	HO N N	ОН	7. 60-7. 45 (5H, m), 7. 42 (1H, d, J = 7. 8Hz), 7. 24 (2H, d, J=8. 7Hz), 5. 15 (2H, s), 4. 37 (1H, m), 4. 00-3. 10 (6H, m), 2. 40-2. 18 (2H, m), 2. 15-1. 95 (2H, m), 1. 90-1. 80 (2 H, m), 1. 75-1. 20 (6H, m)
35	Purity > 90% (NMR)		
	MS 680 (M+1)	· ·	
. r		· · · · · · ·	
40	Example No.	349	1H NMR(δ) ppm

Example No.	349	1H NMR(δ) ppm
HCI CI	0. N	300MHz, DMSO-d6 8. 41 (1H, d, J=1.5Hz), 8. 33 (1H, d, J=1.5Hz), 8. 26 (1H, d, J=8.7Hz), 8. 18 (1H, dd, J=2.0Hz, 8.0Hz), 8. 04 (1H, dd, J=1.5Hz, 9.0Hz), 7. 75 (2H, d, J=8.7Hz), 7. 63 (1H, d, J=8.1Hz), 7. 62-7. 45 (4H, m), 7. 26 (2H, d, J=8.7Hz), 5. 25 (2H, s), 4. 35 (1H, m), 2. 45 (3H, s), 2. 40-2. 18 (2H, m), 2. 15-1. 95 (2H, m), 1. 90-1. 80 (2H, m), 1. 75-1.
Purity > 90% (N)	MR)	55 (1H, m), 1. 50-1. 20 (3H, m)
MS 619 (M+1)		

Table 228

Example No.	350   1H NMR(δ) ppm
HCI CI	300MHz, DMSO-d6 8. 36 (1H, d, J=7. 7Hz), 8. 29 (1H, s), 8. 23 (1H, d, J=8. 8Hz), 8. 02 (1H, d, J=8. 6Hz), 7. 94 (1H, d, J=7. 9Hz), 7. 84 (1H, d, J=1. 6Hz), 7. 80-7. 65 (3H, m), 7. 53 (4H, s), 5. 15 (2H, s), 4. 34 (1H, m), 4. 12 (1H, m), 2. 35-2. 20 (2H, m), 2. 10-1. 60 (5H, m), 1. 50-1. 20 (3H, m), 1. 17 (6H, d, J=6. 5Hz)
Purity >90% ()	MR)
MS 622 (M+	)

Example No.	351	1H NMR(δ) ppm
HO HCI	°	300MHz, DMSO-d6 8. 29 (1H, s), 8. 24 (1H, d, J=8. 8H z), 8. 02 (1H, d, J=8. 6Hz), 7. 80- 7. 65 (3H, m), 7. 55-7. 45 (5H, m), 7. 32 (1H, d, J=1. 5Hz), 7. 22 (2H, d, J=8. 8Hz), 5. 13 (2H, s), 4. 35 ( 1H, m), 3. 60 (2H, m), 3. 33 (2H, m), ,2. 40-2. 15 (2H, m), 2. 10-1. 15 ( 14H, m)
Purity > 90% (NMR)		
MS 648 (M+1)		

Example No.	352	1H NMR(δ) ppm
HCI N N	CI H N OF	300MHZ, DMSO-d6 13. 20(1H, brs), 8. 30-8. 24(2H, m), 8. 13(1H, s), 8. 04(1H, d, J=8 .7Hz), 7. 94(1H, d, J=8 .0Hz), 7. 75-7. 70(3H, m), 7. 55-7. 43(5H, m), 7. 25(2H, d, J=8. 7Hz), 5. 13(2H, s), 4. 36(1H, m), 3. 53(2H, s), 2. 40-2. 18(2H, m), 2. 15-1. 95(2H, m), 1. 90-1. 80(2H, m), 1. 75-1. 55(1H, m), 1. 50-1. 20(9H, m)
Purity >9	0% (NMR)	
MS	652 (M+1)	1 .

Table 229

Example No.		353	1H NMR(δ) ppm
2H( 0 HO N N	CI CI	)=N	300MHz, DMSO-d6 8. 41 (1H, s), 8. 33-8. 29 (2H, m), 8. 16 (1H, d, J=8. 2Hz), 8. 07 (1H, d, J=8. 6Hz), 7. 77 (2H, d, J=8. 7Hz), 7. 62 (1H, d, J=8. 0Hz), 7. 59-7. 51 (4H, m), 7. 28 (2H, d, J=8. 8Hz), 5. 21 (2H, s), 4. 56 (2H, s), 4. 37 (1H, m), 2. 40-2. 18 (2H, m), 2. 15-1. 95 (2H, m), 1. 90-1. 80 (2H, m), 1. 75-1. 55 (1H, m), 1. 50-1. 20 (9H, m)
Purity about 90%(NMR)			
MS	634 (M+1)		

Example	No.	354	1H NMR(δ) ppm
но	HCI CI	о N ОН	300MHz, DMSO-d6 8. 31 (1H, s), 8. 25 (1H, d, J=9. 0H z), 8. 03 (1H, d, J=8. 7Hz), 7. 76-7. 71 (3H, m), 7. 51-7. 47 (5H, m), 7. 33 (1H, s), 7. 23 (2H, d, J=9. 0H z), 5. 14 (2H, s), 4. 36 (1H, m), 4. 02 (1H, m), 3. 75 (1H, m), 3. 56 (1H, m), 3. 22 (2H, m), 2. 40-2. 18 (2H, m), 2. 15-1. 95 (2H, m), 1. 90-1. 55 (5H, m), 1. 50-1. 20 (5H, m)
Purity	>90% (NMR	:) ·	
MS	664 (M+1)		

Example No	•	355	1H NMR(δ) ppm
HCI N N	CI 	- N- N-	300MHz, DMSO-d6 8. 62 (1H, t, J=5. 7Hz), 8. 32-8. 30 (2H, m), 8. 25 (1H, d, J=8. 7Hz), 8. 03 (1H, d, J=8. 7Hz), 7. 96 (1H, d, J=8. 1Hz), 7. 86 (1H, s), 7. 75 1H, d, J=9. 0Hz), 7. 72 (2H, d, J=9. 0Hz), 7. 55-7. 50 (4H, m), 7. 22 2H, d, J=9. 0Hz), 5. 17 (2H, s), 4. 35 (1H, m), 3. 52 (2H, t, J=6. 0Hz), 3. 36 (2H, t, J=6. 0Hz), 2. 40-2. 18 (2H, m), 2. 15-1. 95 (2H, m), 1.
Purity	>90%	(NMR)	90-1.80(2H, m), 1.75-1.55(1H, m), 1.50-1.20(3H, m)
MS	624 (	M+1)	

Table 230

Example No.	356	1H NMR(δ) ppm
но	NH NH	300Mz, DMSO-d6 9. 30(1H, t, J=5. 9Hz), 8. 54(2H, d, J=5. 9Hz), 8. 22(1H, s), 8. 02- 7. 79(5H, m), 7. 59and7. 12(4H, A Bq, J=8. 6Hz), 7. 55(4H, s), 7. 37 (2H, d, J=5. 9Hz), 5. 15(2H, s), 4 .54(2H, d, J=5. 7Hz), 4. 26(1H, b rt, J=12. 8Hz), 2. 36-2. 18(2H, b rm), 1. 97-1. 78(4H, brm), 1. 70- 1. 60(1H, brm), 1. 47-1. 17(3H, b rm)
Purity > 9 0 %	(NMR)	
MS 671	(M+1)	

Example No.	357	1H NMR(δ) ppm
HCI CI	O N-	300Mz, DMSO-d6 8. 31 (1H, d, J=1. 5Hz), 8. 43 (1H, d, J=8. 4Hz), 8. 03 (1H, dd, J=8. 4, 1. 5Hz), 7. 74 (1H, d, J=8. 1Hz), 7. 73 and 7. 23 (4H, ABq, J=9. 0Hz), 7. 54-7. 51 (5H, m), 7. 37 (1H, d, J=1. 8Hz), 5. 14 (2H, s), 4. 36 (1H, brt, J=12. 1Hz), 2. 98 (6H, brs), 2. 37-2. 20 (2H, brm), 2. 08-1. 81 (4H, brm), 1. 70-1. 60 (1H, brm), 1. 50-1. 21 (3H, brm)
Purity >90% (NMR)		
MS 608 (M+1)		

Example	No.	358	1H NMR(δ) ppm
но	2HCI CI	N S NH <sub>2</sub>	300MHz, DMSO-d6 8. 33(1H, s), 8. 31(1H, d, J=8. 7H z), 8. 14(1H, s), 8. 07(1H, d, J=8 . 7Hz), 7. 92(1H, d, J=8. 0Hz), 7. 76(2H, d, J=8. 7Hz), 7. 52-7. 40( 5H, m), 7. 31-7. 26(3H, m), 5. 15( 2H, s), 4. 37(1H, m), 2. 40-2. 18( 2H, m), 2. 15-1. 95(2H, m), 1. 90- 1. 80(2H, m), 1. 75-1. 55(1H, m), 1. 50-1. 20(3H, m)
Purity about 90%(NMR)			
MS	635 (M+1)	)	

	r	able 231	
.·	Example No.	359	IH NMR(δ) ppm
10	HCI CI HCI N O S	;-n <u></u> -oн	300MHz, DMS0-d6 8.31(1H, s), 8.25(1H, d, J=8.7Hz), 8.10-7.90(2H, m), 7.82(1H, dd, J=7.8Hz), 7.72(2H, dJ=9.0Hz), 7.63(1H, d, J=8.1Hz), 7.23(2H, dJ=9.0Hz), 5.25(2H, s), 4.34(1H, m), 3.65-3.50(1H, m), 3.20-3.05(2H, m), 2.90-2.75(2H, m), 2.40-2.15(2H, m), 2.10-1.10(12H. m)
	Purity > 90% (NM	R)	
	MS 700 (M+1)		
	Example No.	360	1H NMR(δ) ppm
<b>25</b> : .	Б О НСІ =	\$	300MHz, DMSO-d6 8.33(1H, s), 8.30(1H, d, J=8.5H z), 8.06(1H, d, J=10.1Hz), 8.80 -8.65(3H, m), 8.60-8.45(3H, m)

Example No.	360	1H NMR(δ) ppm
O HCI	F O N	300MHz, DMSO-d6 8. 33 (1H, s), 8. 30 (1H, d, J=8. 5H z), 8. 06 (1H, d, J=10. 1Hz), 8. 80 -8. 65 (3H, m), 8. 60-8. 45 (3H, m) , 7. 42 (1H, d, J=7. 8Hz), 7. 35-7. 15 (4H, m), 5. 15 (2H, s), 4. 36 (1H , m), 3. 01, 2. 97 (6H, s), 2. 40-2. 15 (2H, m), 2. 10-1. 75 (4H, m), 1. 70-1. 55 (1H, m), 1. 50-1. 20 (3H, m)
Purity > 9 0 %	(NMR)	
MS 592	(M+1)	

Example	No.	361	1H NMR(δ) ppm
но	HCI		300MHz, DMSO-d6 8. 35-8. 20 (2H, m), 8. 05 (1H, d, J) =8. 7Hz), 8. 80-8. 65 (3H, m), 7. 6 0-7. 40 (3H, m), 7. 40-7. 30 (5H, m), 5. 17 (2H, s), 4. 35 (1H, m), 3. 0 1, 2. 97 (6H, s), 2. 40-2. 15 (2H, m), 2. 10-1. 80 (4H, m), 1. 70-1. 20 (4H, m)
Purity	>90% (NMR	2)	
MS .	592(M+1)	•	

Table 232

Example No.	362   1H NMR(δ) ppm
HCI S HON N	300MHz, DMSO-d6 8. 33(1H, s), 8. 29(1H, d, J=8. 7lz), 8. 06(1H, d, J=8. 7Hz), 7. 79 2H, d, J=9. 0Hz), 7. 76(1H, d, J=9. 0Hz), 7. 60(1H, d, J=8. 1Hz), 7. 53(1H, dd, J=1. 7Hz, 8. 0Hz), 7. 35(2H, d, J=8. 7Hz), 6. 85-6. 80(2H, m), 5. 29(2H, s), 4. 38(1H, m), 3. 01, 2. 96(6H, s), 2. 40-2. 18(2H, m), 2. 15-1. 95(2H, m), 1. 90-1. 80(2H, m), 1. 75-1. 55(1H, m), 1.
Purity > 90% (NMR)	. 50-1. 20 (3H, m)
MS 614 (M+1).	

		•
Example No.	363	1H NMR(δ) ppm
O HCI HO N O E	3r,	300MHz, DMSO-d6 8. 28 (1H, d, J=1. 3Hz), 8. 20-8. 1 0 (2H, m), 8. 98 (1H, d, J=8. 6Hz), 7. 90-7. 80 (2H, m), 7. 75 (2H, d, J=8. 7Hz), 7. 04 (1H, d, J=1. 3Hz), 5. 35 (2H, s), 4. 36 (1H, m), 2. 39 (3H, s), 2. 35-2. 15 (2H, m), 2. 05-1. 75 (4H, m), 1. 70-1. 60 (1H, m), 1. 50-1. 2 0 (3H, m)
Purity > 90% (N	MR)	
MS 586 (M+1	)	

Example No.	. 364	1H NMR(δ) ppm
HCI HONN	-o Br	300MHz, DMSO-d6 8. 31 (1H, s), 8. 26 (1H, d, J=8. 7H z), 8. 13 (1H, s), 8. 04 (1H, d, J=9 .0Hz), 7. 90-7. 70 (4H, m), 7. 65 ( 1H, s), 7. 39 (2H, d, J=9. 0Hz), 5. 37 (2H, s), 4. 38 (1H, m), 2. 40-2. 20 (2H, m), 2. 15-2. 00 (2H, m), 1. 95-1. 80 (2H, m), 1. 75-1. 60 (1H, m), 1. 50-1. 20 (3H, m)
Purity > 90%	(NMR)	
MS 604	(M+1)	

Table 233

	Example No.	365	1H NMR(δ) ppm
•	O HCI	CI N	300MHz, DMSO-d6 8. 28 (1H, s), 8. 23 (1H, s), 8. 17 ( 1H, d, J=8. 7Hz), 8. 00 (2H, t, J=6 .9Hz), 7. 69 (2H, d, J=8. 4Hz), 7. 60-7. 45 (5H, m), 7. 21 (2H, d, J=8 .4Hz), 7. 05 (1H, s) 5. 19 (2H, s), 4. 33 (1H, m), 2. 41 (3H, s), 2. 40- 2. 20 (2H, m), 2. 10-1. 80 (4H, m), 1. 70-1. 60 (1H, m), 1. 50-1. 20 (3 H, m)
	Purity > 90%	(NMR)	
	MS 618	(M+1)	

Example	No.	366	1H NMR(δ) ppm
но	HCI CI	S	300MHz, DMSO-d6 8. 26(1H, s), 8. 17(1H, s), 8. 11(1H, d, J=8. 7Hz), 7. 95(2H, d, J=9.6Hz), 7. 70-7. 40(8H, m), 7. 19(2H, d, J=8. 4Hz), 5. 18(2H, s), 4. 30(1H, m), 2. 51(3H, s), 2. 40-2. 15(2H, m), 2. 05-1. 80(4H, m), 1. 75-1. 60(1H, m), 1. 50-1. 20(3H, m)
Purity	>90% (NMR)	)	]
MS	634 (M+1)	•	

Example No.	367	1H NMR(δ) ppm
HCI N HO	CI H N N N	300Mz, DMSO-d6 8. 42 (1H, d, J=1. 9Hz), 8. 30 (1H, J=, 1. 5Hz), 8. 27 (1H, d, J=8. 7Hz), 8. 18 (1H, dd, J=7. 9, 1. 9Hz), 8. 04 (1H, dd, J=8. 7, 1. 5Hz), 7. 75 and 7. 29 (4H, ABq, J=8. 9Hz) 7. 63 (1H, d, J=7. 9Hz), 5. 23 (2H, s), 4. 36 (1H, brt, J=12. 3Hz) 2. 37-2. 20 (2H, brm), 2. 08-1. 80 (4H, brm), 1. 71-1. 60 (1H, brm), 1. 51-1. 21 (3H, brm)
Purity >90%	(NMR)	
MS 605	(M+1)	

Table 234

Example No.	368	1H NMR(δ) ppm .
HCI N	CI	300Mz, DMSO-d6 8. 30(1H, d, J=1. 5Hz), 8. 25(1H, d, J=8. 6Hz), 8. 04(1H, dd, J=8. 6 1. 5Hz), 7. 93and7. 67(4H, ABq, J=8. 1Hz), 7. 80(1H, d, J=2. 2Hz), 7. 72and7. 21(4H, A'B'q, J=8. 6 Hz), 7. 60(1H, dd, J=8. 1, 2. 2Hz), 7. 44(1H, d, J=8. 1Hz), 5. 13(2H, s), 4. 34(1H, brt, J=11. 7Hz), 2. 37-2. 19(2H, brm), 2. 09-1. 80(4H, brm), 1. 72-1. 60(1H, brm), 1
Purity > 90% (NMR)		.50-1.21 (3H, brm)
MS 562 (M+1)		

Example No.	369	lH NMR(δ) ppm
HCI N=	NH CI	300Mz, DMSO-d6 8. 30 (1H, d, J=1. 5Hz), 8. 25 (1H, d, J=8. 6Hz), 8. 16and7. 72 (4H, A Bq, J=8. 4Hz), 8. 13 (1H, dd, J=8. 6, 1. 5Hz), 7. 80 (1Hd, J=2. 2Hz), 7. 70and7. 24 (4H, A' B' q, J=8. 8H z), 7. 61 (1H, dd, J=8. 1, 2. 2Hz), 7. 48 (1H, d, J=8. 1Hz), 5. 17 (2H, s), 4. 33 (1H, brt, J=12. 1Hz), 2. 36-2. 18 (2H, brm), 2. 08-1. 77 (4H, brm), 1. 69-1. 57 (1H, brm), 1.
Purity > 90% (	NMR)	49-1.17 (3H, brm)
MS 605 (M+1)		1

Example N	· .	370	1H NMR(δ) ppm
HO N	CI O-O-N	он	300MHz, DMSO-d6 10.94(1H, brs), 8.33(1H, s), 8. 27(1H, d, J=8.7Hz), 8.04(1H, d, J=8.7Hz), 7.74(2H, d, J=8.4Hz), 7.56-7.29(6H, m), 7.23(2H, d, J=8.7Hz), 7.13(1H, d, J=8.7Hz), 5.08(2H, s), 4.51(2H, brs), 4. 36(1H, m), 3.94(1H, brs), 3.75- 3.00(6H, m), 3.20-1.20(14H, m)
Purity	>90% (NMR)		· .
MS	680 (M+1)		

Table 235

Example	No.	371	1H'NMR(δ) ppm
HCI CI HO N F O			300MHz, DMSO-d6 8. 31 (1H, d, J=1.5Hz), 8. 17 (1H, d, J=9.0Hz), 7. 99 (1H, dd, J=8.7 Hz, 1.4Hz), 7. 70-7. 55 (2H, m), 7. 50-7. 30 (6H, m), 7. 19 (1H, dd, J=12.0Hz, 2.2Hz), 7. 06 (1H, dd, J=8.6Hz, 2.2Hz), 5. 08 (2H, 4. 10 (1H, m), 3. 68 (2H, brt, J=5.2), 2. 50 (2H, brt, J=1.8Hz), 2. 30-2. 10 (2H, m), 2. 00-1. 75 (8H, m), 1. 70-1. 55 (1H, m), 1. 50-1. 20 (3H, m)
Purity	>90% (NMR)	)	,
MS	652 (M+1)		

Example No.	372	1H NMR(δ) ppm
HCI N N	CI N	300Mz, DMSO-d6 8. 29(1H, d, J=1.5Hz), 8. 11(1H, d, J=8.6Hz), 7. 96(1H, dd, J=8.6, 1.5Hz), 7. 89(1H, s), 7. 78and7 . 56(4H, ABq, J=8.4Hz), 7. 69(1H, s), 7. 66(1H, t, J=8.8Hz), 7. 31 (1H, dd, J=12.1, 2.2Hz), 7. 18(1H, dd, J=8.8, 2.2Hz), 5. 37(2H, s), 4. 08(1H, brt, J=11.0Hz), 3. 0 2(3H, s), 2. 96(3H, s), 2. 31-2. 1 4(2H, brm), 1. 95-1. 77(4H, brm,
Purity > 9	90% (NMR)	) 1.69-1.59 (31H, brm), 1.46-1. 18 (3H, brm)
MS	626 (M+1)	

Example No.	373	1H NMR(δ) ppm
2HCI HO N F	O NH <sub>2</sub> OH	300MHz, DMSO-d6 11.40(1H, brs), 9.25(2H, brs), 8.29(1H, d, J=1.3Hz), 8.12-8.0 9(2H, m), 7.96(1H, d, J=8.7Hz), 7.88(1H, dd, J=1.8Hz, 8.1Hz), 7.67-7.63(2H, m), 7.56(2H, d, J=8.7Hz), 7.51(2H, d, J=8.7Hz), 7.17(1H, d, J=12.0Hz), 7.05(1H, d, J=8.6Hz), 5.16(2H, s), 4.05(1H, m), 2.40-2.10(2H, m), 2.00-1.75(4H, m), 1.70-1.55(1H, m),
Purity >90%	(NMR)	1.50~1.20 (3H, m)
MS 613	(M+1)	

Table 236

Example No.	374   1H NMR(δ) ppm
HCI F CI	300MHz, DMSO-d6 13. 21 (1H, brs), 8. 31 (1H, d, J=1 . 4Hz), 8. 18-8. 15 (2H, m), 7. 99 ( 1H, d, J=8. 7Hz), 7. 94 (1H, dd, J= 1. 8Hz, 8. 0Hz), 7. 70-7. 53 (6H, m) ), 7. 17 (1H, d, J=12. 0Hz), 7. 05 ( 1H, d, J=8. 6Hz), 5. 20 (2H, s), 4. 09 (1H, m), 2. 40-2. 10 (2H, m), 2. 00-1. 75 (4H, m), 1. 70-1. 55 (1H, m), 1. 50-1. 20 (3H, m)
Purity > 90% (NM.	2)
MS 639 (M+1)	

Example No.	375	1H NMR(δ) ppm
HCI E O	) H, S, O	300MHz, DMSO-d6 8. 32(1H, d, J=1.5Hz), 8. 23(1H, d, J=1.5Hz), 8. 19(1H, d, J=9.0Hz), 8. 03-7.98(2H, m), 7. 68(1H, t, J=8.4Hz), 7. 60(1H, d, J=8.1Hz), 7. 56(2H, d, J=9.3Hz), 7. 53(2H, d, J=9.0Hz), 7. 22(1H, dd, J=2.1Hz, 12.0Hz), 7. 09(1H, dd, J=2.1Hz, 8. 4Hz), 5. 21(2H, s), 4. 12(1H, m), 2. 40-2.10(2H, m), 2. 00-1.75(4H, m), 1. 70-1.55(1H, m)
Purity >90% (NN	IR)	), 1.50-1.20(3H, m)
MS 658 (M+1)		

Example No.	376	lH NMR(δ) ppm
HCI HON F	D H N N N N N N N N N N N N N N N N N N	300MHz, DMSO-d6 13.61(1H, brs), 8.34-8.30(2H, m), 8.21(1H, d, J=8.7Hz), 8.07(1H, dd, J=1.8Hz, 8.1Hz), 8.02(1H, dd, J=1.5Hz, 8.7Hz), 7.69(1H, t, J=8.4Hz), 7.57-7.49(5H, m), 7.22(1H, dd, J=2.7Hz, 12.0Hz), 7.09(1H, dd, J=2.4Hz, 9.0Hz), 5.19(2H, s), 4.12(1H, m), 2.40-2.10(2H, m), 2.00-1.75(4H, m), 1.70-1.55(1H, m), 1.50-1.20(3
Purity >90%	(NMR)	H, m)
MS 655	(M+1)	

#### EP 1 400 241 A1

Table 237

Example No.		37.7	1H NMR(δ) ppm
HCI E O			300Mz, DMSO-d6 8.60(1H, d, J=4.5Hz), 8.29(1H, d, J=1.5Hz), 8.14(1H, d, J=8.9Hz), 8.13(1H, d, J=1.5Hz), 7.98(1H, dd, J=8.9, 1.5Hz), 7.94(1H, dd, J=8.1, 1.5Hz), 7.64(1H, t, J=8.7Hz), 7.52and7.49(4H, ABq, J=9.0Hz), 7.46(1H, d, J=8.1Hz), 7.18(1H, dd, J=12.1, 2.3Hz), 7.05(1H, dd, J=8.7, 2.3Hz), 5.13(2H, s), 4.08(1H, brt, J=12.1H)
Purity > 9	0% (NMR)		, 2. 95-2. 84 (1H, m), 2. 31-2. 14 ( 2H, brm), 1. 97-1. 78 (4H, brm), 1
MS	638 (M+1)		. 72-1. 59(1H, brm), 1. 47-1. 21(3H, brm), 0. 76-0. 58(4H, m)

Example	No.	. 378	8 1H NMR(δ) ppm :
НО	ICI N N	C H	300Mz, DMSO-d6 8. 77 (1H, d, J=1. 4Hz), 8. 30 (1H, d, J=1. 4Hz), 8. 16 (1H, d, J=1. 8Hz), 8. 13 (1H, d, J=8. 4Hz), 7. 98 (2H, dd, J=8. 4, 1. 8Hz), 7. 65 (1H, t, J=8. 4Hz), 7. 53 and 7. 49 (4H, ABq, J=8. 8Hz), 7. 47 (1H, d, J=7. 7Hz), 7. 18 (1H, dd, J=12. 1, 2. 2Hz), 7. 05 (1H, dd, J=8. 4, 2. 2Hz), 5. 13 (2H, s), 4. 53-4. 40 (1H, m), 4. 09 (1H, brt, J=12. 8Hz), 2. 31-2
Purity	> 9 0 %	(NMR)	.02 (6H, brm, ), 1.96-1.80 (4H, brm), 1.78-1.60 (3H, brm), 1.47-1.21 (3H, brm)
MS	652	M+1)	1. 21 (3n, 01m)

Example No.	379	1H NMR(δ) ppm
HCI F	O H	300Mz, DMSO-d6 8. 29 (1H, d, J=1. 1Hz), 8. 11 (1H, d, J=1. 5Hz), 8. 11 (1H, d, J=8. 8Hz), 7. 98-7. 91 (2H, m), 7. 89 (1H, s), 7. 63 (1H, t, J=8. 8Hz), 7. 52a nd7. 48 (4H, ABq, J=8. 6Hz), 7. 44 (1H, d, J=8. 1Hz), 7. 17 (1H, dd, J=12. 1, 2. 2Hz), 7. 04 (1H, dd, J=8. 8, 2. 2Hz), 5. 12 (2H, s), 4. 07 (1H, brt, J=12. 4Hz), 2. 33-2. 14 (2H, brm), 1. 96-1. 79 (4H, brm), 1.
Purity > 90%	(NMR)	70-1.60(1H, brm), 1.48-1.21(3 H, brm), 1.41(9H, s)
MS . 654	(M+1)	

Table 238

Example	No.	380	1H NMR(δ) ppm
HCI E O		-H	300Mz, DMSO-d6 8. 62 (1H, t, J=5. 5Hz), 8. 30 (1H, d, J=1. 5Hz), 8. 17 (1H, d, J=1. 8Hz), 7. 98 (1H, dd, J=8. Hz), 7. 98 (1H, dd, J=8. 1, 1. 8Hz), 7. 64 (1H, t, J=8. 8Hz), 7. 52and7. 50 (4H, A Bq, J=8. 8Hz), 7. 48 (1H, d, J=8. 1 Hz), 7. 18 (1H, dd, J=12. 1, 2. 2Hz), 7. 05 (1H, dd, J=8. 8, 2. 2Hz), 5. 14 (2H, s), 4. 08 (1H, brt, J=12. 1Hz), 3. 13 (1H, t, J=6. 2Hz), 2. 3
Purity	>90% (NMR)		1-2. 14 (2H, brm), 1.97-1.78 (5H , brm), 1.70-1.60 (1H, brm), 1.4
MS	654 (M+1)		7-1. 21 (3H, brm), 0. 92 (3H, s), 0 . 90 (3H, s)

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15

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55

Example	No.	381	T
но	CI F. N.	у он	
Purity	>90% (NMR	)	}
MS	656 (M+1)		a

1H NMR( $\delta$ ) ppm 300Mz, DMS0-d6 300Mz, DMSO-d6
8. 29 (1H, d, J=1. 5Hz), 8. 27 (1H, d, J=8. 3Hz), 8. 18 (1H, d, J=1. 9Hz), 8. 13 (1H, d, J=8. 7Hz), 8. 01-7. 96 (2H, m), 7. 64 (1H, t, J=8. 7Hz), 7. 52and7. 49 (1H, ABq, J=8. 8Hz), 7. 49 (1H, d, J=7. 9Hz), 7. 18 (1H, dd, J=12. 1, 2. 3Hz), 7. 05 (1H, dd, J=8. 7, 2. 3Hz), 5. 13 (2H, s), 4. 12-4. 00 (2H, m), 3. 52-3. 34 (2H, m), 2. 31-2. 14 (2H, brm), 1. 97-1. 79 (4H, brm), 1. 71-1. 60 (1 97-1.79(4H, brm), 1.71-1.60(1 H, brm), 1.48-1.21 (3H, m), 1.17 and 1. 15 (total 3H, each s)

Example No.	. 382	1H NMR(δ) ppm
HCI FOR CI	_N_O-	300Mz, DMSO-d6 8. 30 (1H, d, J=1.5Hz), 8. 13 (1H, d, J=8.8Hz), 8. 09 (1H, d, J=1.5Hz), 7. 98 (1H, dd, J=8.8, 1.5Hz), 7. 86 (1H, dd, J=8.1, 1.5Hz), 7. 64 (1H, J=8.8Hz), 7.55-7.47 (5H, m), 7. 17 (1H, dd, J=12.1, 2.2Hz), 7. 05 (1H, dd, J=8.8, 2.2Hz), 5. 14 (2H, s), 4. 08 (1H, brt, J=12.8 Hz), 3. 75 (3H, s), 2. 32-2. 14 (2H, brm), 1. 96-1. 78 (4H, brm), 1. 7
Purity >90% (NMR)		0-1.59(1H, brm), 1.47-1.21(3H, brm)
MS 628 (M+1)		

Table 239

Example No.	383	1H NMR(δ) ppm
HCI E HO HCI E HO	_он	300Mz, DMSO-d6 8.57(1H, t, J=5.5Hz), 8.29(1H, d, J=1.4Hz), 8.19(1H, d, J=1.5Hz), 8.12(1H, d, J=9.2Hz), 8.01-7.95(2H, m), 7.64(1H, t, J=8.8Hz), 7.53and7.50(4H, ABq, J=8.8Hz), 7.48(1H, d, J=7.7Hz), 7.17(1H, dd, J=12.1, 2.2Hz), 7.04(1H, dd, J=8.8, 2.2Hz), 5.14(2H, s), 4.08(1H, brt, J=13.9Hz), 3.70-3.66(1H, m), 3.48-3.36(3H, m)
Purity >90% (NMR	)	), 3. 28-3. 20(1H, m), 2. 32-2. 13 (2H, brm), 1. 96-1. 79(4H, brm), 1. 71-1. 60(1H, brm), 1. 47-1. 19
MS 672(M+1)		(3H, brm)

	<del></del>	T
Example No.	. 384	1H NMR(δ) ppm
HCI CI HO N N N N N N N N N N N N N N N N N N		300Mz, DMSO-d6 8. 30 (1H, d, J=1. 5Hz), 8. 14 (1H, d, J=8. 4Hz), 7. 98 (1H, dd, J=8. 4, 1. 5Hz), 7. 68 (1H, brs), 7. 63 (1H, t, J=8. 4Hz), 7. 51 (5H, s), 7. 4 3 (1H, d, J=8. 1Hz), 7. 17 (1H, dd, J=12. 5, 1. 8Hz), 7. 03 (1H, dd, J=8. 4, 1. 8Hz), 4. 08 (1H, brt, J=11. 4Hz), 3. 50 and 3. 30 (total 2H, e ach brs), 2. 97 (3H, brs), 2. 33-2. 13
Purity > 90% (N	MR)	(2H, brm), 1.96-1.79(4H, brm), 1.70-1.59(1H, brm), 1.47-1.03 (6H, brm),
MS 640 (M+1	)	(Oii, OI m/,

Example No.	385	1H NMR(δ) ppm
HCI F O		300Mz, DMSO-d6 8. 29 (1H, d, J=1. 5Hz), 8. 12 (1H, d, J=8. 8Hz), 7. 97 (1H, dd, J=8. 8, 1. 5Hz), 7. 72-7. 60 (2H, m), 7. 5 5-7. 42 (6H, m), 7. 16 (1H, d, J=11. 7Hz), 7. 03 (1H, d, J=8. 4Hz), 5. 15 (2H, s), 4. 07 (1H, brt, J=12. 5Hz), 3. 44and3. 22 (total2H, each s), 2. 97 (3H, brs), 2. 32-2. 13 (2H, brm), 1. 72-1. 50 (3H, brm), 1.
Purity >90% (	NMR)	47-1.23(3H, brm), 0.93and0.72 (total3H, each brs)
MS 654 (M-	+1)	\ \

Table 240

Example No.	386	1H NMR(δ) ppm
HCI F N N N N N N N N N N N N N N N N N N		300Mz, DMSO-d6 8. 29(1H, d, J=1. 5Hz), 8. 12(1H, d, J=8. 7Hz), 7. 97(1H, dd, J=8. 7, 1. 5Hz) 7. 74-7. 60(2H, m), 7. 54 -7. 42(6H, m), 7. 17(1H, dd, J=12. 1, 2. 2Hz), 7. 02(1H, dd, J=8. 3, 2. 2Hz), 5. 15(2H, s), 4. 06(1H, b rt, J=12. 8Hz), 3. 92(1H, brs), 2. 85(3H, brs), 2. 32-2. 14(2H, brm), 1. 96-1. 79(4H, brm), 1. 70-1. 59(1H, brm), 1. 46-1. 07(3H, br
Purity > 90% (NM	R)	m), 1.15(6H, brs)
MS 654 (M+1)	T. T.	·

Example No.	387	1H NMR(δ) ppm
HCI F O		300Mz, DMSO-d6 8. 29(1H, s), 8. 14and7. 97(2H, A Bq, J=8. 7Hz), 7. 63(1H, s), 7. 63 (1H, t, J=8. 7Hz), 7. 51-7. 41(6H, m), 7. 16(1H, dd, J=12. 1, 1. 9Hz), 7. 02(1H, dd, J=8. 7, 1. 9Hz), 5. 16(2H, s), 4. 26(2H, brs), 4. 07 (1H, brt, J=12. 1Hz), 2. 32-2. 14 (2H, brm), 1. 97-1. 78(5H, brm) 1 . 70-1. 15(9H, brm), 1. 24(3H, s) , 1. 21(3H, s)
Purity >90% (NMF	₹)	
MS 694 (M+1)		

Example No.	· .	388	1H NMR(δ) ppm
HCI O HO N	CI F	H N	300MHz, DMSO-d6 8.58(1H, m), 8.29(1H, s), 8.20- 8.10(2H, m), 8.05-7.90(2H, m), 7.64(1H <t, 7.60-7.4<br="" j="8.4Hz),">0(5H, m), 7.15(1H, d, J=12.3Hz), 7.04(1H, d, J=8.4Hz), 5.13(2H, s), 4.08(1H, m), 3.40-3.20(2H, m), 2.35-2.10(2H, m), 2.00-1. 20(12H, m), 0.91(3H, t, J=6.9Hz)</t,>
Purity	>90% (1	NMR)	·
MS .	654 (M+	1)	

Table 241

Example No.	389	1H NMR(δ) ppm
HCI F N N N N N N N N N N N N N N N N N N	₽ H T	300MHz, DMSO-d6 8.60(1H, m), 8.29(1H, s), 8.20— 7.90(4H, m), 7.64(1H, t, J=9.0H z), 7.60-7.40(5H, m), 7.17(1H, d, J=12.0Hz), 7.04(1H, d, J=8.7 Hz), 5.13(2H, s), 4.80(1H, m), 3 .35-3.15(2H, m), 2.30-2.05(2H, m), 2.00-1.10(10H, m), 0.91(3 H, t, J=7.5Hz)
Purity > 90% (N)	MR)	
MS 640 (M+1)	)	,

Example No.	. 390	1H NMR(δ) ppm
HCI CI N N N N N N N N N N N N N N N N N	> - - - - - - - - - - - - - - -	300MHz, DMSO-d6 8. 62 (1H, m), 8, 30 (1H, s), 8. 20- 8. 10 (2H, m), 8. 05-7. 90 (2H, m), 7. 65 (1H, t, J=8. 4Hz), 7. 60-7. 4 0 (5H, m), 7. 18 (1H, d, J=12. 0Hz), 7. 05 (1H, d, J=8. 4Hz), 5. 14 (2H, s), 4. 09 (1H, m), 3. 40-3. 20 (2H, m), 2. 35-2. 10 (2H, m), 2. 00-1. 80 (4H, m), 1. 75-1. 60 (1H, m), 1. 45-1. 20 (3H, m), 1. 15 (3H, t, J=7. 2Hz)
Purity > 90% (NM	(R)	
MS 626 (M+1)		

Example No.	391	1H NMR(δ) ppm
HCI HONN	CI N N	400NHz, DMSO-d6 8. 54(1H, s), 8. 31(1H, s), 8. 19( 1H, d, J=8. 6Hz), 8. 01(1H, d, J=8 .6Hz), 7. 81(1H, d, J=2. 1Hz), 7. 64(1H, t, J=8. 4Hz), 7. 61(1H, dd , J=2. 3Hz, 8. 4Hz), 7. 47(2H, d, J =8. 6Hz), 7. 43(2H, d, J=8. 8Hz), 7. 25(1H, d, J=8. 4Hz), 7. 17(1H, dd, J=2. 3Hz, 12. 1Hz), 7. 05(1H, dd, J=2. 3Hz, 8. 6Hz), 5. 05(2H, s ), 4. 12(1H, m), 2. 96(6H, s), 2. 4
Purity > 9 0 9	% (NMR)	
MS 64	11 (M+1)	(on, m)

Table 242

.Example	No.	392	IH NMR(δ) ppm
но	HCI F O		300Mz, DMSO-d6 8. 79 (1H, s), 8. 29 (1H, d, J=1. 5H z), 8. 13 (1H, d, J=8. 8Hz), 7. 98 ( 1H, dd, J=8. 8, 1. 5Hz), 7. 80 (1H, d, J=2. 2Hz), 7. 63 (1H, t, J=8. 4H z), 7. 61 (1H, dd, J=8. 2, 2. 2Hz), 7. 47and7. 43 (4H, ABq, J=8. 8Hz), 7. 26 (1H, d, J=8. 2Hz), 7. 14 (1H, dd, J=12. 1, 2. 2Hz), 7. 02 (1H, dd, J=8. 4, 2. 2Hz), 5. 05 (2H, s), 4 .08 (1H, brt, J=12. 1Hz), 3. 64-3
Purity	>90% (NM)	R)	. 61 (2H, m), 3. 48-3. 45 (2H, m), 2 . 32-2. 13 (2H, brm), 1. 96-1. 78 (
MS	683 (M+1)		4H, brm), 1.70-1.66(1H, brm), 1.44-1.19(3H, brm)

Example No.	393	1H NMR(δ) ppm
HCI FOR CI	O N-(NH <sub>2</sub>	400MHz, DMSO-d6 8. 94 (1H, s), 8. 31 (1H, d, J=1. 0H z), 8. 18 (1H, d, J=8. 6Hz), 8. 00 ( 1H, dd, J=1. 4Hz, 8. 8Hz), 7. 71 (1 H, d, J=2. 2Hz), 7. 66 (1H, t, J=8. 6Hz), 7. 52 (1H, dd, J=2. 4Hz, 8. 6 Hz), 7. 46 (2H, d, J=8. 6Hz), 7. 42 (2H, d, J=8. 2Hz), 7. 24 (1H, d, J=8. 4Hz), 7. 16 (1H, d, J=12. 1Hz), 7. 04 (1H, dd, J=2. 4Hz, 8. 8Hz), 5. 05 (2H, s), 4. 13 (1H, m), 2. 40-2
Purity > 90% (	NMR)	. 10 (2H, m), 2. 00-1. 75 (4H, m), 1 . 70-1. 55 (1H, m), 1. 50-1. 20 (3H
MS 613 (M	+1)	, m)

Example	No.	394	1H NMR(δ) ppm
НО	HCI N N	CI NH N	300MHz, DMSO-d6 8. 93 (1H, s), 8. 31 (1H, d, J=1. 4H z), 8. 19 (1H, d, J=8. 8Hz), 8. 01 (1H, d, J=8. 7Hz), 7. 71 (1H, d, J=2. 2Hz), 7. 66 (1H, t, J=8. 5Hz), 7. 51 (1H, dd, J=2. 2Hz, 8. 4Hz), 7. 4 6(2H, d, J=8. 6Hz), 7. 41 (2H, d, J=8. 7Hz), 7. 23 (1H, d, J=8. 4Hz), 7. 16 (1H, d, J=12. 2Hz), 7. 05 (1H, d, J=8. 7Hz), 5. 05 (2H, s), 4. 13 (1H, m), 3. 12 (2H, q, J=7. 2Hz), 2
Purity	> 9 0 %	(NMR)	. 40-2. 10 (2H, m), 2. 00-1. 75 (4H , m), 1. 70-1. 60 (1H, m), 1. 55-1.
MS	641	(M+1)	20 (3H, m), 1.06 (3H, t, J=7.2Hz)

Table 243

Example No.	395	1H NMR(δ) ppm ·
HCI F	D O V H	300MHz, DMSO-d6 8. 83(1H, s), 8. 32(1H, d, J=1. 4Hz), 8. 21(1H, d, J=8. 8Hz), 8. 02(1H, dd, J=1. 4Hz, 8. 7Hz), 7. 71(1H, dd, J=2. 1Hz), 7. 68(1H, t, J=8. 6Hz), 7. 49(1H, dd, J=2. 2Hz, 8. 4Hz), 7. 46(2H, d, J=8. 4Hz), 7. 41(2H, d, J=8. 6Hz), 7. 23(1H, d, J=8. 4Hz), 7. 17(1H, d, J=12. 2Hz), 7. 06(1H, d, J=8. 7Hz), 6. 30(1H, brs), 5. 05(2H, s), 4. 14(1H, m),
Purity > 90%	(NMR)	3.77(1H, sept, J=6.5Hz), 2.40- 2.10(2H, m), 2.00-1.75(4H, m), 1.70-1.55(1H, m), 1.50-1.20(3
MS 655 (	M+1)	H, m), 1. 11 (6H, d, J=6. 5Hz)

Example	No.	396	IH NMR(δ) ppm
но	N F O F	)_N	300MHz, DMSO-d6 8. 37 (1H, d, J=7. 3Hz), 8. 25 (1H, s), 8. 15 (1H, s), 7. 97 (2H, d, J=8. 8Hz), 7. 88 (1H, d, J=8. 8Hz), 7. 58-7. 47 (4H, m), 7. 31 (1H, m), 7. 11 (1H, dd, J=8. 4, 2. 2Hz), 6. 98 (1H, dd, J=8. 4, 2. 2), 5. 13 (2H, s), 4. 13 (1H, q, J=6. 6Hz), 3. 98 (1H, m), 2. 19 (2H, m), 1. 86 (4H, m) 1. 62 (1H, m) 1. 31 (3H, m), 1. 20 (6H, d, J=6. 6Hz)
Purity	>90% (NMR	)	
MS	642 (M+1)		•

Example No.	397	1H NMR(δ) ppm
HCI HO N	F	300MHz, DMSO-d6 8. 40(1H, d, J=7. 9Hz), 8. 28(1H, d, J=1. 9Hz), 8. 15(1H, d, J=1. 9Hz), 8. 15(1H, d, J=1. 9Hz), 8. 11(1H, d, J=8. 7Hz), 7. 96(2H, m), 7. 56(1H, t, J=8. 7Hz), 7. 45(3H, m), 7. 18(1H, m), 7. 08(1H, dd, J=12. 1, 1. 9Hz), 6. 96(1H, dd, J=8. 3, 2. 3Hz), 5. 09(2H, s), 4. 14(1H, m), 4. 04(1H, m), 2. 23(2H, m), 1. 86(3H, m), 1. 62(1H, m), 1. 33(3H, m), 1. 20(6H, d, J=6. 4H
Purity > 909	% (NMR)	z)
MS 64	12 (M+1)	]·

Table 244

Example No.	398	1H NMR(δ) ppm
HCI CI CI N CI N CI N CI N CI N CI N CI	H N	8. 41 (1H, d, J=8. 1Hz), 8. 29 (1H, d, J=1. 5Hz), 8. 17 (1H, d, J=1. 8Hz), 8. 12 (1H, d, J=8. 4Hz), 8. 01-7. 95 (2H, m), 7. 67-7. 62 (2H, m), 7. 55-7. 51 (3H, m), 7. 19 (1H, dd, J=12. 1, 2. 2Hz), 7. 05 (1H, dd, J=8. 8, 2. 2Hz), 5. 13 (2H, s), 4. 10-4. 00 (2H, m), 2. 32-2. 13 (4H, m), 1. 71-1. 60 (1H, m), 1. 49-1. 14 (3H, m), 1. 21 (3H, s), 1. 19 (3H, s)
Purity >90% (NMR)		
MS 674 (M+1)		

Example No. 39	9 1H NMR(δ) ppm
HCI F CI HO N N N N N N N N N N N N N N N N N N	300Mz, DMSO-d6 8. 39 (1H, d, J=7. 7Hz), 8. 29 (1H, d, J=1. 5Hz), 8. 16 (1H, d, J=1. 8Hz), 8. 11 (1H, d, J=8. 8Hz), 8. 00-7. 95 (2H, m), 7. 69-7. 61 (2H, m), 7. 54-7. 46 (3H, m), 7. 18 (1H, dd, J=12. 1, 2. 2Hz), 7. 04 (1H, dd, J=8. 8, 2. 2Hz), 5. 13 (2H, s), 4. 20-4. 02 (2H, m), 2. 33-2. 13 (2H, brm), 1. 97-1. 80 (4H, m), 1. 72-1. 61 (1H, m), 1. 44-1. 13 (3H, m), 1. 21
Purity >90% (NMR)	(3H, s), 1. 19 (3H, s)
MS 658 (M+1)	

Example No.	400	1H NMR(δ) ppm
HCI HO N	CI CI	300MHz, DMSO-d6 8. 39 (1H, d, J=7.7Hz), 8. 29 (1H, s), 8. 17 (1H, d, J=1.5Hz), 8. 11 (1H, d, J=8.8Hz), 7. 98 (2H, m), 7. 73 (2H, m), 7. 64 (1H, t, J=8.4Hz), 7. 52 (1H, d, J=8.0Hz), 7. 46 (1H, dd, J=8.4, 1.8Hz), 7. 18 (1H, dd, J=11.9, 2.0Hz), 7. 05 (1H, dd, J=8.6, 2.4Hz), 5. 14 (2H, s), 4. 13 (2H, m), 2. 22 (2H, m), 1. 88 (4H, m)
Purity >90%	(NMR)	1.64(1H, m), 1.34(3H, m), 1.20( 6H, d, J=6.6Hz)
MS 64	2 (M+1)	

Table 245

Example No.	401.	1H NMR(δ) ppm
HCI CI F	ZZH	300MHz, DMSO-d6 8.38(1H, d, J=7.8Hz), 8.28(1H, s), 8.20-8.05(2H, m), 8.00-7.9 0(2H, m), 7.65-7.30(5H, m), 7.0 9(1H, d, J=12.3Hz), 6.97(1H, d, J=10.2Hz), 5.09(2H, s), 4.20-4 .00(2H, m), 2.30-2.10(2H, m), 2 .00-1.80(4H, m), 1.70-1.60(1H, m), 1.40-1.10(3H, m), 1.19(6H, d, J=6.6Hz)
Purity > 90% (NMR)		
MS 658 (M+1)		

<u> </u>		
Example No.	402	1H NMR(δ) ppm
HCI N N	CI F ON	300MHz, DMSO-d6 8. 25(1H, s), 8. 03(1H, d, J=8. 7Hz), 7. 91(1H, d, J=8. 7Hz), 7. 83(1H, s), 7. 70-7. 35(6H, m), 7. 04(1H, d, J=12. 0Hz), 6. 93(1H, d, J=8. 4Hz), 5. 09(2H, s), 4. 00(1H, m), 3. 60-3. 40(4H, m), 2. 30-2. 10(2H, m), 1. 45-1. 15(3H, m)
Purity > 90%	(NMR)	
MS 670	(M+1)	

Example No.	403	IH NMR(δ) ppm
HCI CI F		400MHz, DMSO-d6 8.25(1H, s), 8.08(1H, d, J=8.4Hz), 7.92(1H, d, J=9.2Hz), 7.79(1H, s), 7.66-7.49(4H, m), 7.42(1H, d, J=7.6Hz), 7.31-7.28(1H, m), 7.14(1H, d, J=11.3Hz), 6.99(1H, d, J=8.8Hz), 5.13(2H, s), 4.02(1H, m), 3.54-3.33(4H, m), 2.29-2.08(2H, m), 1.93-1.73(8H, m), 1.67-1.52(1H, m), 1.48-1.11(3H, m)
Purity >90% (NMF	1)	
MS 670 (M+1)		

Table 246

Example No.	404	1H NMR(δ) ppm
HCI O HO N N	CI F H N	400MHz, DMSO-d6 8. 41 (1H, d, J=7. 6Hz), 8. 32 (1H, d, J=1. 5Hz), 8. 20 (1H, d, J=8. 6H z), 8. 17 (1H, d, J=1. 7Hz), 8. 00 (1H, dt, J=8. 8Hz, 1. 5Hz), 7. 71-7. 64 (2H, m), 7. 54 (1H, dd, J=10. 3 Hz, 1. 9Hz), 7. 32 (1H, dd, J=8. 2H z, 1. 9Hz), 7. 32 (1H, dd, J=12. 1H z, 2. 3Hz), 7. 08 (1H, dd, J=8. 6Hz), 2. 3Hz), 5. 17 (2H, s), 4. 15 (1H, m), 2. 31-2. 14 (2H, m), 1. 99-1.
Purity > 9 0 %	6 (NMR)	70(4H, m), 1.70-1.60(1H, m), 1. 46-1.20(3H, m), 1.19(6H, d, J=6
MS 65	8 (M+1)	6Hz)

Example No	ο.	405	5 <sup>.</sup>	lH NMR(δ) ppm
но	N F	s - N	0	300MHz, DMSO-d6 8. 32 (1H, s), 8. 19 (1H, d, J=9. 0H z), 8. 03-7. 98 (2H, m), 7. 75 (1H, dd, J=2. 1Hz, 8. 4Hz), 7. 67 (1H, t , J=8. 6Hz), 7. 40-7. 36 (3H, m), 7 . 32 (2H, d, J=8. 4Hz), 7. 19 (1H, d d, J=2. 1Hz, 12. 3Hz), 7. 07 (1H, d d, J=2. 1Hz, 8. 7Hz), 5. 11 (2H, s) , 4. 12 (1H, m), 4. 12 (1H, m), 3. 90 (2H, t, J=6. 9Hz), 2. 54 (2H, t, J= 8. 1Hz), 2. 50 (3H, s), 2. 40-2. 05
Purity	>90%	(NMR)		(4H, m), 2.00-1.75(4H, m), 1.70 -1.55(1H, m), 1.50-1.20(3H, m)
MS .	650	(M+1)		·

Example No.	406	1H NMR(δ) ppm
HCI E O	NH NH	300MHz, DMSO-d6 8. 34(1H, d, J=7. 7Hz), 8. 29(1H, s), 8. 15(1H, s), 8. 11(1H, d, J=8. 8Hz), 7. 97(2H, d, J=9.2Hz), 7. 63(1H, t, J=8. 8Hz), 7. 47-7. 31(5H, m), 7. 18(1H, dd, J=12. 4, 2. 2Hz), 7. 06(1H, dd, J=12. 4, 2. 2Hz), 5. 13(2H, s), 4. 13(2H, m), 1. 96(2H, m), 1. 87(4H, m), 1. 62(1H, m), 1. 34(3H, m), 1. 20(6H, d, J=6. 2Hz)
Purity >90% (	NMR)	
MS 652 (M-	+1)	

Table 247

Example No.	407	1H NMR(δ). ppm
HCI HO N F	CI CI O N-S=0	400MHz, DMSO-d6 8. 32 (1H, d, J=1. 4Hz), 8. 20 (1H, d, J=8. 8Hz), 8. 01 (1H, dd, J=1. 6 Hz, 8. 8Hz), 7. 90 (1H, s), 7. 67 (1 H, t, J=8. 4Hz), 7. 61 (1H, s), 7. 5 5-7. 50 (4H, m), 7. 21 (1H, dd, J=2. 3Hz, 12. 0Hz), 7. 06 (1H, dd, J=2. 2Hz, 8. 7Hz), 5. 10 (2H, s), 4. 11 (1H, m), 3. 78 (2H, t, J=6. 7Hz), 3. 47 (2H, t, J=7. 4Hz), 2. 54-2. 48 (2H, m), 2. 40-2. 10 (2H, m), 2. 00
Purity > 90%	(NMR)	-1.80(4H, m), 1.75-1.55(1H, m) , 1.50-1.20(3H, m)
MS 708	3 (M+1)	

Example	No.	408	1H NMR(δ) ppm
НО		CI CI CI	400MHz, DMSO-d6 8. 32 (1H, d, J=1.6Hz), 8. 21 (1H, d, J=8.8Hz), 8. 02 (1H, dd, J=1.6 Hz, 8.8Hz), 7. 76 (1H, s), 7. 68 (1 H, t, J=8.5Hz), 7. 59 (1H, s), 7. 5 4-7.51 (4H, m), 7. 21 (1H, dd, J=2.4Hz, 12.1Hz), 7. 07 (1H, dd, J=2.4Hz, 8.8Hz), 5. 08 (2H, s), 4. 11 (1H, m), 3. 77 (2H, t, J=6.9Hz), 2. 47 (2H, t, J=8.0Hz), 2. 40-2.10 (4H, m), 2. 00-1.80 (4H, m), 1. 70
Purity	> 9 0 %	(NMR)	-1.60 (1H, m), 1.45-1.20 (3H, m)
MS	672 (1	M+1)	

		<del>,</del>
Example No.	409	1H NMR(δ) ppm
HCI CI	H S H	300MHz, DMSO-d68. 28(1H, d, J=1.5Hz), 8. 20-8. 85(4H, m), 7. 75(1H, d, J=6.9Hz), 7. 70-7. 45(6H, m), 7. 13(1H, dd, J=12.0Hz, 2. 1Hz), 7. 00(1H, dd, J=8. 7Hz), 2. 1Hz), 5. 22(2H, s), 4. 05(1H, m), 3. 40-3. 20(1H, m), 2. 30-2. 10(2H, m), 2. 00-1. 55(5H, m), 1. 45-1. 10(3H, m), 1. 00(6H, d, J=6.6Hz)
Purity > 90% (NN	(R)	
MS 676 (M+1)		

Table 248

Example No.	410	1H NMR(δ) ppm
HCI HO N	F CI	300MHz, DMSO-d6 8. 31 (1H, s), 8. 00 (1H, d, J=8. 7H z), 7. 88 (1H, d, J=8. 7Hz), 7. 70 ( 1H, s), 7. 65 (1H, t, J=8. 4Hz), 7. 53 (2H, d, J=8. 4Hz), 7. 49 (2H, d, J=8. 7Hz), 7. 45-7. 41 (2H, m), 7. 16 (1H, d, J=12. 0Hz), 7. 04 (1H, d, J=8. 7Hz), 5. 14 (2H, s), 4. 68 (1H, quint, J=8. 4Hz), 3. 02, 2. 98 (6H, s), 2. 30-1. 85 (6H, m), 1. 80-1. 50 (2H, m)
Purity >9	0% (NMR)	
MS	612 (M+1)	

Example No.	411	1H NMR(δ) ppm
HCI C	о	300MHz, DMSO-d6 8. 30 (1H, s), 7. 99 (1H, d, J=9. 0H z), 7. 87 (1H, d, J=8. 7Hz), 7. 67 ( 1H, s), 7. 64 (1H, t, J=8. 7Hz), 7. 53 (2H, d, J=8. 7Hz), 7. 49 (2H, d, J=7. 5Hz), 7. 45-7. 41 (2H, m), 7. 15 (1H, d, J=12. 3Hz), 7. 02 (1H, d, J=8. 4Hz), 5. 15 (2H, s), 4. 67 (1 H, quint, J=8. 7Hz), 4. 02 (1H, m), 3. 76 (1H, m), 3. 55 (1H, m), 3. 22 (2H, m), 2. 40-1. 20 (12H, m)
Purity > 90	% (NMR)	
MS 6	68 (M+1)	· .

Example No.	412	1H NMR(δ) ppm
HCI CI	H N	300MHz, DMSO-d6 8. 38 (1H, d, J=7. 5Hz), 8. 33 (1H, s), 8. 16 (1H, s), 8. 02 (1H, d, J=8. 7Hz), 7. 98 (1H, d, J=9. 0Hz), 7. 91 (1H, d, J=8. 4Hz), 7. 67 (1H, t, J=8. 4Hz), 7. 53 (2H, d, J=8. 7Hz), 7. 48 (2H, d, J=8. 7Hz), 7. 46 (1H, d, J=8. 1Hz), 7. 18 (1H, d, J=11. 7Hz), 7. 06 (1H, d, J=8. 7Hz), 5. 1 3 (2H, s), 4. 70 (1H, quint, J=8. 4 Hz), 4. 13 (1H, sept, J=6. 6Hz), 2
Purity > 90% (	NMR)	.30-1.85(6H, m), 1.80-1.50(2H, m), 1.16(6H, d, J=6.3Hz)
MS 626 (M	(+1)	1

Table 249

Example	No.	413	1H NMR(δ) ppm
НО	CI	H H	300Mz, DMSO-d6 8. 39(1H, d, J=7. 5Hz), 8. 31(1H, d, J=1. 5Hz), 8. 16(1H, d, J=1. 9Hz), 8. 06(1H, dd, J=8. 8, 1. 5Hz), 7. 99-7. 95(2H, m), 7. 76and7. 24(4H, ABq, J=8. 9Hz), 7. 53and7. 50(4H, A'B'q, J=9. 1Hz), 7. 46(1H, d, J=8. 3Hz), 5. 14(2H, s), 4. 94(1H, quint, J=9. 0Hz), 4. 19-4. 08(1H, m), 2. 32-2. 11(4H, brm), 2. 10-1. 95(2H, brm), 1. 78-1. 62(
Purity	>90% (NMR)		2H, brm), 1.26(3H, s), 1.18(3H, s)
MS	608 (M+1)		

Example No.	414	1H NMR(δ) ppm
HCI HO N	CI	300Mz, DMSO-d6 8. 31 (1H, d, J=1.5Hz), 8. 06 (1H, dd, J=8.7, 1.5Hz), 7. 97 (1H, d, J=8.7Hz), 7. 75 and 7. 22 (4H, ABq, J=8.9Hz), 7. 70 (1H, d, J=1.9Hz), 7. 53 (1H, dd, J=7.9, 1.9Hz), 7. 52 (4H, s), 7. 43 (1H, d, J=7.9Hz), 5. 15 (2H, s), 4. 93 (1H, quint, J=8.9Hz), 3. 01 (3H, s), 2. 97 (3H, s), 2. 32-2. 11 (4H, brm), 2. 09-1. 94 (2H, brm), 1. 77-1. 62 (2H, brm)
Purity >909	6 (NMR)	m)
MS 59	4 (M+1)	

Example No.	415.	1H NMR(δ) ppm
HCI C		300Mz, DMSO-d6 8. 31 (1H, d, J=1. 5Hz), 8. 06 (1H, dd, J=8. 7, 1. 5Hz), 7. 98 (1H, d, J=8. 7Hz), 7. 75 and 7. 22 (4H, ABq, J=8. 9Hz), 7. 67 (1H, d, J=1. 5Hz), 7. 52 (4H, s), 7. 49 (1H, dd, J=7. 9, 1. 5Hz), 7. 43 (1H, d, J=8. 9Hz), 5. 16 (2H, s), 4. 93 (1H, quint, J=8. 9Hz), 3. 76 (1H, brs), 3. 55 (2H, brs), 3. 22 (2H, brs), 2. 31-2. 11 (4H, brm), 2. 16-1. 95 (2H, brm)
Purity >90	% (NMR)	), 1.88-1.62(4H, brm), 1.48-1. 28(2H, brm)
MS 6	50 (M+1)	

# EP 1 400 241 A1

Table 250

Example No.	416	1H NMR(δ) ppm
HCI O HO N N S	CI HN O	300MHz, DMSO-d6 8. 38 (1H, d, J=7. 7Hz), 8. 30 (1H, s), 8. 20-7. 90 (4H, m), 7. 72 (2H, d, J=8. 7Hz), 7. 60-7. 40 (5H, m), 7. 22 (2H, d, J=8. 7Hz), 5. 13 (2H, s), 4. 47 (1H, m), 4. 15 (1H, m), 2. 90-2. 70 (4H, m), 2. 60-2. 30 (4H, m), 1. 19 (6H, d, J=6. 5Hz)
Purity >9	0% (NMR)	
MS	640 (M+1)	

		<u>.</u>
Example No.	417	1H NMR(δ) ppm
HCI HO N	CI	400MHz, DMSO-d6 8. 33(1H, s), 8. 17(1H, d, J=8. 6Hz), 7. 82(1H, d, J=1. 4Hz), 7. 74(2H, d, J=8. 7Hz), 7. 64(1H, dd, J=8. 0Hz, 1. 7Hz), 7. 55-7. 50(4H, m), 7. 43(1H, d, J=7. 8Hz), 7. 24(1H, d, J=8. 7Hz), 5. 16(2H, s), 4. 49(1H, m), 3. 60-3. 40(4H, m), 2. 90-2. 70(4H, m), 2. 60-2. 30(4H, m), 2. 20-1. 80(4H, m)
Purity >90%	(NMR)	
MS 652	(M+1)	

Example No.	418	1H NMR(δ) ppm
HCI HO N F	CI	400MHz, DMSO-d6 8. 34 (1H, d, J=7.6Hz), 8. 25 (1H, s), 8. 11 (1H, d, J=1.3Hz), 7. 90- 8. 00 (3H, m), 7. 59 (1H, t, J=8.6H z), 7. 40-7.55 (5H, m), 7. 12 (1H, d, J=11.9Hz), 7. 00 (1H, d, J=8.6 Hz), 5. 08 (2H, s), 4. 30-4. 10 (2H, m), 2. 80-2. 65 (4H, m), 2. 45-2. 30 (2H, m), 1. 15 (6H, d, J=4.8Hz)
Purity > 90%	(NMR)	
MS 658	(M+1)	

Table 251

Example No.	419	1H NMR(δ) ppm
HCI O HO N N	F CI N O	400MHz, DMSO-d6 8. 30(1H, s), 8. 05-7. 95(3H, m), 7. 80-7. 75(1H, m), 7. 63(1H, t, J) =8. 6Hz), 7. 55-7. 35(5H, m), 7. 1 5(1H, dd, J=12. 1Hz, 2. 1Hz), 7. 0 3(1H, dd, J=8. 7Hz, 2. 3Hz), 5. 10 (2H, s), 4. 23(1H, m), 3. 90(2H, t , J=7. 0Hz), 2. 95-2. 70(4H, m), 2 .60-2. 35(4H, m), 2. 30-2. 00(4H , m)
Purity > 9	90% (NMR)	
MS	656 (M+1)	

Example	No.	420	1H NMR(δ) ppm
но	CI N N	D H	300Mz, DMSO-d6 8. 37 (1H, d, J=7. 5Hz), 8. 28 (1H, d, J=1. 5Hz), 8. 17 (1H, d, J=1. 5Hz), 8. 13 (1H, d, J=8. 7Hz), 7. 97 (1H, dd, J=8. 7, 1. 5Hz), 7. 94 (1H, dd, J=8. 7, 1. 5Hz), 7. 61 (1H, t, J=8. 7Hz), 7. 51 and 7. 49 (4H, ABq, J=8. 9Hz), 7. 46 (1H, d, J=8. 1Hz), 7. 08 (1H, dd, J=12. 4, 2. 3Hz), 6. 97 (1H, dd, J=8. 7, 2. 3Hz), 5. 10 (2H, s), 4. 20-4. 08 (1H, m), 3. 62
Purity	>90% (NM	R)	-3.56(2H, brm), 3.13-3.10(2H, brm), 1.79-1.60(3H, brm), 1.54
MS	641 (M+1)		-1.34(3H, brm), 1.21(3H, s), 1. 18(3H, s)

Example No.	421	1H NMR(δ) ppm
HO N F Q		300Mz, DMSO-d6 8. 24 (1H, d, J=1. 5Hz), 8. 02 (1H, d, J=8. 7Hz), 7. 88 (1H, dd, J=8. 7, 1. 5Hz), 7. 82 (1H, d, J=1. 9Hz), 7. 63 (1H, dd, J=7. 9, 1. 9Hz), 7. 54 (1H, t, J=8. 7Hz), 7. 50 (4H, s), 7. 42 (1H, d, J=7. 9Hz), 7. 01 (1H, dd, J=12. 0, 2. 3Hz), 6. 91 (1H, dd, J=8. 7, 2. 3Hz), 5. 11 (2H, s), 3. 63-3. 41 (6H, m), 3. 07-3. 04 (2H, brm), 1. 95-1. 79 (4H, brm), 1. 77
Purity > 90% (	NMR)	-1.57 (3H, brm), 1.50-1.32 (3H, brm)
MS 653 (M-	+1)	

Table 252

Example No.	422	1H NMR(δ) ppm
2HCI O F HO N	CI HNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN	300MHz, DMSO-d6 10. 99 (2H, s), 8. 44 (1H, s), 8. 30 (1H, s), 8. 18 (1H, d, J=8. 7Hz), 8 .14 (1H, d, J=8. 7Hz), 7. 98 (1H, d, J=9. 0Hz), 7. 70-7. 66 (2H, m), 7 .57 (2H, d, J=8. 7Hz), 7. 54 (2H, d, J=8. 7Hz), 7. 21 (1H, d, J=12. 0Hz), 7. 09 (1H, d, J=8. 4Hz), 5. 19 (2H, s), 4. 05 (4H, s), 2. 40-2. 18 (2H, m), 2. 15-1. 80 (4H, m), 1. 75-1. 55 (1H, m), 1. 50-1. 20 (3H, m)
Purity >90	% (NMR)	
MS 6	23 (M+1)	

<del></del>	<del></del>	
Example No.	423	1H NMR(δ) ppm
HCI O HO N	CI N-0	300MHz, DMSO-d6 8. 27 (1H, s), 8. 05 (1H, d, J=8. 7H z), 7. 93 (1H, d, J=8. 7Hz), 7. 90 (1H, s), 7. 70 (1H, d, J=8. 4Hz), 7. 59 (1H, t, J=8. 4Hz), 7. 50 (2H, d, J=9. 0Hz), 7. 45 (2H, d, J=8. 7Hz), 7. 41 (1H, d, J=8. 4Hz), 7. 12 (1H, d, J=12. 0Hz), 7. 00 (1H, d, J=8. 7Hz), 5. 10 (2H, s), 4. 49 (2H, t, J=7. 8Hz), 4. 14 (2H, t, J=8. 0Hz), 4. 04 (1H, m), 2. 40-2. 10 (2H, m),
Purity > 9	0% (NMR)	2.00-1.50(5H, m), 1.45-1.20(3 H, m)
MS	640 (M+1)	

Example No.	424	1H NMR(δ) ppm
HCI HO N	CI	300MHz, DMSO-d6 8. 30(1H, s), 8. 14(1H, d, J=8. 4H z), 7. 98(1H, d, J=9. 3Hz), 7. 89(1H, s), 7. 68(1H, d, J=8. 4Hz), 7. 62(1H, d, J=9. 0Hz), 7. 48(2H, d, J=8. 4Hz), 7. 43(2H, d, J=8. 4Hz), 7. 33(1H, d, J=8. 4Hz), 7. 16(1H, d, J=12. 0Hz), 7. 04(1H, d, J=9. 0Hz), 5. 07(2H, s), 4. 10(1H, m), 3. 92(2H, t, J=8. 0Hz), 3. 45(2H, t, J=8. 0Hz), 2. 40-2. 10(2H, m),
Purity > 9 0 %	(NMR)	2.00-1.50(5H, m), 1.45-1.20(3 H, m)
MS 639	9 (M+1)	

Table 253

Example No.	425	1H NMR(δ) ppm
2HCI CI HO N F O	) % 2	300MHz, DMSO-d6 9.05(1H, s), 8.30(1H, s), 8.16( 1H, d, J=8.8Hz), 7.99(1H, d, J=8 .6Hz), 7.72(1H, s), 7.64(1H, t, J=8.6Hz), 7.52(1H, d, J=8.4Hz) .7.47(2H, d, J=8.7Hz), 7.42(2H .d, J=8.6Hz), 7.25(1H, d, J=8.4 Hz), 7.15(1H, d, J=12.2Hz), 7.0 4(1H, d, J=8.6Hz), 6.60(1H, brs ), 5.05(2H, s), 4.10(1H, m), 3.6 8(2H, t, J=6.1Hz), 3.45(2H, t, J
Purity >90% (NMR)		=6. 1Hz), 2. 40-2. 10(2H, m), 2. 0 0-1. 55(5H, m), 1. 50-1. 20(3H, m
MS 639 (M+1)		

Example N	0.	426	1H NMR(δ). ppm
HO HO			300MHz, DMSO-d6 8. 32 (1H, s), 8. 24 (1H, d, J=8. 7H z), 8. 03 (1H, d, J=8. 7Hz), 7. 78- 7. 73 (4H, m), 7. 38-7. 32 (4H, m), 5. 52 (2H, s), 4. 88 (2H, s), 4. 40 ( 2H, s), 4. 37 (1H, m), 2. 92, 2. 84 ( 6H, s), 2. 40-2. 18 (2H, m), 2. 15- 1. 95 (2H, m), 1. 90-1. 80 (2H, m), 1. 75-1. 55 (1H, m), 1. 50-1. 20 (3 H, m)
Purity	>90% (1	NMR)	
MS	643 (M+	1) .	·

Example No.	427	1H NMR(δ) ppm
2HCI		300MHz, DMSO-d6 11.26(1H, brs), 8.35(1H, s), 8. 27(1H, d, J=9.0Hz), 8.05(1H, d, J=8.4Hz), 7.83-7.78(4H, m), 7. 42-7.35(4H, m), 5.57(2H, s), 4. 77, 4.73(2H, s), 4.37(1H, m), 3. 95(1H, s), 3.70-3.00(4H, m), 2. 40-1.00(14H, m)
Purity >	90% (NMR)	
MS	641 (M+1)	

# EP 1 400 241 A1

Table 254

Example	e No.	428	1H NMR(δ) ppm
но	HCI F. N. S. O.	O NH <sub>2</sub>	300MHz, DMSO-d6 8. 31 (1H, s), 8. 26 (1H, d, J=9. 0H z), 8. 04 (1H, d, J=8. 7Hz), 7. 79- 7. 73 (4H, m), 7. 38-7. 31 (6H, m), 5. 53 (2H, s), 4. 90 (2H, s), 4. 37 ( 1H, m), 4. 05 (2H, s), 2. 40-2. 18 ( 2H, m), 2. 15-1. 95 (2H, m), 1. 90- 1. 80 (2H, m), 1. 75-1. 55 (1H, m), 1. 50-1. 20 (3H, m)
Purity	>90% (NMR)		
MS.	615 (M+1)		

Example	No.	429	1H NMR(δ) ppm
но	CI N N	N S O HX	300MHz, DMSO-d6 8. 88(1H, q, J=4. 5Hz), 8. 33(1H, d, J=1. 5Hz), 8. 18(1H, d, J=8. 7Hz), 8. 01(1H, dd, J=1. 5Hz, 8. 7Hz), 7. 89-7. 83(2H, m), 7. 50-7. 34(3H, m), 7. 20(1H, dd, J=2. 1Hz, 8. 4Hz), 5. 61(2H, s), 4. 13(1H, m), 2. 84(3H, d, J=4. 8Hz), 2. 40-2. 10(2H, m), 2. 00-1. 75(4H, m), 1. 70-1. 55(1H, m), 1. 50-1. 20(3H, m)
Purity	>90%	(NMR)	
MS	603 (	M+1)	

Example N	io.	430	1H NMR(δ) ppm
HCI O HO N N	F - C	S TZ O	400MHz, DMSO-d6 8. 79(1H, t, J=5. 9Hz), 8. 31(1H, s), 8. 15(1H, d, J=8. 7Hz), 7. 99(1H, d, J=8. 8Hz), 7. 87(1H, d, J=8. 1Hz), 7. 85(1H, d, J=8. 7Hz), 7. 70(1H, t, J=8. 4Hz), 7. 42-7. 33(3H, m), 7. 18(1H, d, J=8. 8Hz), 5. 60(2H, s), 4. 11(1H, m), 3. 62-3. 54(4H, m), 2. 40-2. 10(2H, m), 2. 00-1. 75(4H, m), 1. 70-1. 55(1H, m), 1. 50-1. 20(3H, m)
Purity	>90% (	NMR)	
MS	633 (M	(+1)	

Table 255

Example	No.	431	lH NMR(δ) ppm
но	HCI F	S N O	300MHz, DMSO-d6 8. 31 (1H, s), 8. 16 (1H, d, J=8. 8H z), 7. 99 (1H, d, J=8. 7Hz), 7. 74- 7. 60 (4H, m), 7. 37 (2H, t, J=8. 8H z), 7. 28 (1H, dd, J=2. 2Hz, 12. 2H z), 7. 14 (1H, dd, J=2. 2Hz, 8. 6Hz ), 5. 17 (2H, s), 4. 10 (1H, m), 3. 1 5 (6H, brs), 2. 40-2. 10 (2H, m), 2 .00-1. 75 (4H, m), 1. 70-1. 55 (1H ,m), 1. 50-1. 15 (3H, m)
Purity	. > 9 0 % (NM	(R)	
MS	616(M+1)		

Example No. 432	1H NMR(δ) ppm
HCI F HO S H N O	300MHz, DMSO-d6 8. 45(1H, d, J=7. 7Hz), 8. 32(1H, s), 8. 19(1H, d, J=8. 8Hz), 8. 02-7. 99(2H, m), 7. 70(1H, t, J=8. 6Hz), 7. 60(2H, dd, J=5. 4Hz, 8. 7Hz), 7. 37(2H, t, J=8. 8Hz), 7. 27(1H, dd, J=2. 3Hz, 12. 2Hz), 7. 14(1H, dd, J=2. 2Hz, 8. 7Hz), 5. 16(2H, s), 4. 20-4. 00(2H, m), 2. 40-2. 10(2H, m), 2. 00-1. 75(4H, m), 1. 70-1. 55(1H, m), 1. 50-1. 20(3H, m), 2. 01. 20(3H
Purity >90% (NMR)	m), 1. 18 (6H, d, J=6. 6Hz)
MS 630 (M+1)	]

Example No.	433	1H NMR(δ) ppm
HCI HO N		300MHz, DMSO-d6 8. 31 (1H, d, J=1. 4Hz), 8. 15 (1H d, J=8. 8Hz), 7. 98 (1H, dd, J=1. Hz, 8. 7Hz), 7. 68-7. 60 (4H, m), .36 (2H, t, J=8. 8Hz), 7. 28 (1H, d, J=2. 2Hz, 12. 2Hz), 7. 15 (1H, d, J=2. 2Hz, 8. 6Hz), 5. 17 (2H, s, 4. 10 (1H, m), 4. 05-3. 90 (2H, m, 3. 85-3. 70 (1H, m), 3. 55-3. 25 2H, m), 2. 40-2. 10 (2H, m), 2. 00 1. 75 (6H, m), 1. 70-1. 55 (1H, m)
Purity >	90% (NMR)	1. 50-1. 20 (5H, m)
MS	672 (M+1)	

Table 256

Example	No.	434	1H NMR(δ) ppm
IZ, Z, ZI	F CI	) - N	300Mz, DMSO-d6 8. 45(1H, d, J=1. 5Hz), 8. 26(1H, d, J=8. 8Hz), 8. 10(1H, dd, J=8. 8, 1. 5Hz), 7. 72(1H, d, J=1. 5Hz), 7. 64(1H, t, J=8. 6Hz), 7. 56 -7. 48(5H, m), 7. 44(1H, d, J=J=7. 7Hz), 7. 18(1H, dd, J=12. 3, 2. 4Hz), 7. 04(1H, dd, J=8. 6, 2. 4Hz), 5. 15(2H, s), 4. 08(1H, brt; J=11. 7Hz), 3. 02(3H, s), 2. 99 (3H, s), 2. 34-2. 17(2H, brm), 1
Purity	>90% (NMR)	)	.97-1.81 (4H, brm), 1.70-1.60 (1H, brm), 1.49-1.21 (3H, brm)
MS	650 (M+1)		

Example No.	435	1H NMR(δ) ppm
HCI OH		300Mz, DMSO-d6 8. 42(1H, d, J=1. 5Hz), 8. 24(1H, d, J=8. 8Hz), 8. 08(1H, dd, J=8. 8Hz), 7. 79(1H, d, J=7. 8Hz), 7. 62(1H, t, J=8. 4Hz), 7. 61-7. 55(3H, m), 7. 44(1H, d, J=8. 1Hz), 7. 16(1H, dd, J=12. 1, 2. 6Hz), 7. 02(1H, dd, J=8. 4, 2. 6Hz), 5. 12(2H, s), 4. 07(1H, brt, J=12. 5Hz), 2. 33(2H, brm), 1. 96-1. 79(4H, brm), 1. 7
Purity >90% (NMR)		1-1.61 (1H, brm), 1.49-1.21 (3H, brm)
MS 623 (M+1)		

Example No.	436	1H NMR(δ) ppm
O HCI	CI	300MHz, DMSO-d6 8. 41 (1H, d, J=7. 7Hz), 8. 30-8. 2 6 (2H, m), 8. 18 (1H, d, J=1. 4Hz), 7. 99 (1H, dd, J=1. 7Hz, 8. 0Hz), 7. 89 (1H, d, J=10. 1Hz), 7. 67 (1H, t, J=8. 8Hz), 7. 55-7. 45 (5H, m), 7. 20 (1H, d, J=12. 2Hz), 7. 07 (1H, dd, J=2. 1Hz, 8. 7Hz), 5. 14 (2H, s), 4. 18-4. 11 (2H, m), 2. 40-2. 1 0 (2H, m), 2. 00-1. 75 (4H, m), 1. 7 0-1. 55 (1H, m), 1. 50-1. 20 (3H, m)
Purity > 90%	(NMR)	), 1. 20 (6H, d, J=6. 6Hz)
MS 680	(M+1)	1

# EP 1 400 241 A1

Table 257

Example 1	io.	437	1H NMR(δ) ppm
N.	CI N N N	) — О ОН	
Purity	>90% (NM	R)	
MS	580 (M+1)		

Example No.	438	1H NMR(δ) ppm
N F O		
Purity > 90% (NM	IR)	
MS 607 (M+1)		

Example No.	439	1H NMR(δ) ppm
но N	N-(-)-(N-	300MHz, CDC13 8.60(1H, d, J=1.5Hz), 8.05(1H, dd, J=1.6Hz, 8.7Hz), 7.70(1H, d, J=8.7Hz), 7.62(2H, d, J=8.2Hz), 7.49(2H, d, J=8.2Hz), 7.31(2H, d, J=8.8Hz), 7.27-7.23(2H, m), 7.06(2H, t, J=8.6Hz), 6.80(2H, d, J=8.8Hz), 5.05(2H, s), 4.38(1H, m), 3.06(6H, s), 2.45-2.20(2H, m), 2.10-1.70(5H, m), 1.50-1.20(3H, m)
Purity > 90%	(NMR)	
MS 591(	M+1)	

Table 258

	<del></del>		
Example 1	N F OH F	440	1H NMR(δ) ppm 300MHz, DMSO-d6 8. 20(1H, s), 7. 86(2H, m), 7. 39(1H, d, J=7. 9Hz), 7. 34(1H, d, J=7. 9Hz), 7. 07(2H, dt, J=2. 3Hz, 8. 6Hz), 6. 98-6. 88(5H, m), 6. 83(1H, d, J=8. 3Hz), 5. 91(1H, s), 3. 9
Purity	>90% (NMR)	·	H, d, J=8. 3Hz), 5. 91(1H, s), 3. 9 6(1H, m), 2. 30-1. 95(2H, m), 1. 9 0-1. 50(4H, m), 1. 40-1. 10(3H, m
MS	557 (M+1)	·	

Example No.	441	1H NMR(δ).ppm
HO F	- Б ОН	300MHz, DMSO-d6 8. 24(1H, d, J=1. 4Hz), 8. 01(1H, d, J=8. 8Hz), 7. 91(1H, dd, J=1. 4 Hz, 8. 7Hz), 7. 47(1H, t, J=8. 4Hz), 7. 43-7. 35(2H, m), 7. 15-7. 01 (5H, m), 6. 92(2H, d, J=10. 4Hz), 6. 11(1H, s), 3. 90(1H, m), 2. 30-1. 95(2H, m), 1. 90-1. 50(4H, m), 1. 40-1. 10(3H, m)
Purity > 90% (NM	R)	-
MS 557 (M+1)		

Example No.	442	1H NMR(δ) ppm
HCI HON FOR		300Mz, DMSO-d6 8. 26(1H, d, J=1. 5Hz), 8. 11(1H, d, J=8. 9Hz), 7. 96(1H, dd, J=8. 9 + 1. 5Hz), 7. 65-7. 57(5H, m), 7. 4 7(1H, t, J=7. 7Hz), 7. 35(1H, d, J=7. 6Hz), 7. 30-7. 22(3H, m), 7. 1 6(1H, dd, J=8. 7, 2. 3Hz), 6. 88(1 H, s), 4. 04(1H, brt, J=11. 3Hz), 2. 98(3H, s) 2. 84(3H, s), 2. 30-2. 10(2H, brm), 1. 94-1. 75(4H, brm), 1. 68-1. 57(1H, brm), 1. 45-1
Purity > 90% (1	NMR)	. 14 (3H, brm)
MS 610 (M+	-1)	

Table 259

Example N	o.	443	1H NMR(δ) ppm
HO	F		300Mz, DMSO-d6 8. 23 (1H, s), 7. 98and7. 89 (2H, A) Bq, J=8. 8Hz), 7. 62-7. 06 (11H, B) ), 6. 86 (1H, s), 4. 12-3. 77 (2H, B) rm), 3. 72 (1H, brs), 3. 69 (1H, brs), 3. 18 (1H, brs), 3. 05 (1H, brs), 2. 31-2. 08 (2H, brm), 1. 90-1. 54 (7H, brm), 1. 48-1. 13 (5H, brm)
Purity	> 9 0 %	(NMR)	
MS	666 (	M+1)	1

Example No. 44	14 1H NMR(δ) ppm
HO O O O O O O O O O O O O O O O O O O	300MHz, DMSO-d6 8. 36 (1H, s), 8. 00 (1H, d, J=8. 7H z), 7. 90 (1H, d, J=9. 3Hz), 7. 80- 7. 70 (2H, m), 7. 63 (2H, d, J=8. 4H z), 7. 32 (2H, t, J=8. 7Hz), 7. 22 ( 2H, d, J=8. 4Hz), 5. 62 (1H, d, J=7 . 5Hz), 5. 57 (1H, brd, J=4. 8Hz), 5. 41 (2H, s), 5. 31 (1H, m), 4. 29 ( 1H, m), 3. 84 (1H, d, J=9. 0Hz), 3. 50-3. 20 (3H, m), 2. 71 (3H, s), 2. 40-2. 20 (2H, m), 1. 75-1. 60 (1H,
Purity >90% (NMR)	m), 1.50-1.20(3H, m)
MS 718 (M+1)	

Example 1	No. 4	45	1H NMR(δ) ppm
HO O HO O O O O O O		<b>_</b>	300MHz, DMSO-d6 8. 36(1H, s), 8. 00(1H, d, J=8. 7H z), 7. 92(1H, d, J=9. 3Hz), 7. 57( 1H, t, J=8. 4Hz), 7. 50-7. 35(6H, m), 7. 25-7. 05(4H, m), 6. 82(1H, s), 5. 62(1H, d, J=7. 2Hz), 5. 56( 1H, m), 5. 28(1H, brs), 3. 95(1H, m), 3. 82(1H, d, J=8. 7Hz), 3. 50- 3. 20(3H, m), 2. 30-2. 05(2H, m), 1. 90-1. 55(5H, m), 1. 40-1. 10(3 H, m)
Purity	>90% (NMR)		
MS	733 (M+1)		

Table 260

Example	No.	446	1H NMR(δ) ppm
но	HCI F	) N-5=0	300MHz, DMSO-d6 8. 29 (1H, s), 8. 13 (1H, d, J=9. 0H z), 7. 97 (1H, d, J=9. 0Hz), 7. 63 ( 1H, t, J=8. 6Hz), 7. 51-7. 32 (7H; m), 7. 15 (1H, d, J=12. 0Hz), 7. 03 (1H, d, J=9. 0Hz), 5. 10 (2H, s), 4 .09 (1H, m), 3. 82 (2H, t, J=6. 3Hz ), 3. 56 (2H, t, J=7. 4Hz), 2. 45 (2 H, m), 2. 40-2. 10 (2H, m), 2. 00-1 .55 (5H, m), 1. 50-1. 20 (3H, m)
Purity	>90% (NMF	3)	
MS	674 (M+1)		

Example No	447	1H NMR(δ) ppm 300MHz, DMSO-d6
H <sub>2</sub> N-S	F O H	8. 36 (1H, d, J=7. 7Hz), 8. 14 (2H, d, J=12. 1Hz), 8. 08 (1H, d, J=8. 5Hz), 7. 97 (1H, dd, J=1. 7Hz, 8. 3Hz), 7. 7 4 (1H, dd, J=1. 8Hz, 8. 4Hz), 7. 58-7 . 45 (6H, m), 7. 31 (2H, s), 7. 12 (1H, dd, J=2. 2Hz, 12. 1Hz), 7. 00 (1H, dd, J=2. 4Hz, 8. 6Hz), 5. 11 (2H, s), 4. 16 (1H, m), 4. 02 (1H, m), 2. 20 (2H, m), 1. 86 (4H, m), 1. 62 (1H, m), 1. 21 (
Purity	>90% (NMR)	9H, m)
MS	675 (M+1)	

Example No	•	448	1H NMR(δ) ppm
но	HCI F	CI O=N- H	300MHz, DMSO-d6 8. 29 (2H, m), 8. 04 (1H, d, J=8. 5Hz), 7. 93 (1H, dd, J=1. 5Hz, 8. 8Hz), 7. 60-7. 42 (8H, m), 7. 05 (1H, dd, J=2. 2Hz, 12. 1Hz), 6. 95 (1H, dd, J=2. 4Hz, 8. 6Hz), 5. 11 (2H, s), 4. 07-3. 90 (2H, m), 2. 28-2. 19 (2H, m), 1. 88-1. 84 (4H, m), 1. 67-1. 62 (1H, m), 1. 4 0-1. 26 (3H, m), 1. 04 (6H, d, J=6. 6H
Purity	>90%	(NMR)	
MS	640	(M+1)	

Table 261

Example	No. 449	1H NMR(δ) ppm
НО	HCI FOR N-S=0	300MHz, DMSO-d6 8. 31 (1H, s), 8. 17 (1H, d, J=8. 7Hz), 8. 00 (1H, d, J=8. 7Hz), 7. 78 (1H, d, J=8. 1Hz), 7. 66 (1H, t, J=8. 7Hz), 7. 5 5-7. 45 (4H, m), 7. 40 (1H, d, J=11. 7Hz), 7. 19 (1H, d, J=12. 3Hz), 7. 05 (1H, d, J=8. 7Hz), 5. 07 (2H, s), 4. 10 (1H, m), 3. 85 (2H, t, J=6. 6Hz), 3. 47 (2H, t, J=7. 5z) 2. 60-2. 50 (2H, m), 2. 40 -2. 10 (2H, m), 2. 00-1. 80 (4H, m), 1.
Purity	>90% (NMR)	75-1.55(1H, m), 1.50-1.20(3H, m)
MS	692 (M+1)	

Example No.		450	1H NMR(δ) ppm 300MHz, DMSO-d6
HO N	F 0 0	H -N -	8. 37 (1H, d, J=7. 8Hz), 8. 15 (1H, s), 7. 97 (1H, d, J=9. 8Hz), 7. 64-7. 45 (8 H, m), 7. 12 (1H, d, J=12. 1Hz), 7. 00 (1H, d, J=8. 6Hz), 5. 11 (2H, s), 4. 21 (3H, s), 4. 18-4. 05 (1H, m), 4. 04-3. 8 9 (1H, m), 2. 29-2. 08 (2H, m), 1. 90-1 .74 (4H, m), 1. 68-1. 58 (1H, m), 1. 40 -1. 17 (3H, m), 1. 20 (6H, d, J=6. 6Hz)
Purity	>90% (NMR)		·
MS	670 (M+1)	-	·

Example No.	451	1H NMR(δ) ppm 300MHz, DMSO-d6
HCI CI HO N F	) N—0	8. 29 (1H, s), 8. 12 (1H, d, J=8. 8Hz), 7. 97 (1H, d, J=10. 2Hz), 7. 65-7. 59 (2H, m), 7. 51 (4H, s), 7. 46 (2H, s), 7. 15 (1H, d, J=12. 2Hz), 7. 01 (1H, d, J=8. 6Hz), 5. 15 (2H, s), 4. 13-3. 98 (1H, m), 3. 21 (3H, s), 2. 56-2. 42 (1H, m), 2. 30-2. 15 (2H, m), 1. 95-1. 77 (4H, m), 1. 69-1. 59 (1H, m), 1. 45-1. 17 (3H, m), 0. 96 (6H, d, J=6. 5Hz)
Purity > 90% (NMR)		
MS 654 (M+1)		

Table 262

Example No	· ·	452	1H NMR(δ) ppm 300MHz, DMSO-d6
HCI F O		0	10. 1 (1H, s), 8. 28 (1H, s), 8. 11 (1H, d, J=8. 7Hz), 7. 96 (1H, d, J=11. 4Hz), 7. 95 (1H, s), 7. 72 (1H, d, J=8. 7Hz), 7. 62 (1H, t, J=9. 0Hz), 7. 48 and 7. 43 (4H, ABq, J=8. 4Hz), 7. 31 (1H, d, J=8. 4Hz), 7. 13 (1H, d, J=12. 0Hz), 7. 02 (1H, d, J=9. 0Hz), 5. 07 (2H, s), 4. 14-4. 00 (1H, m), 2. 69-2. 59 (1H, m), 2. 30-2. 12 (2H, m), 1. 95-1. 77 (4H,
Purity	>90% (NMR)		m), 1.71-1.57(1H, m), 1.45-1.20(3
MS	640 (M+1)		H, m), 1. 12 (6H, d, J=6. 9Hz)

Example No		453	1H NMR(δ) ppm	
HO N S OH			300MHz, DMSO-d6 11. 1 (1H, brs), 8. 31 (1H, d, J=9. 4Hz ), 8. 29 (1H, s), 8. 07 (1H, d, J=10. 2Hz ), 7. 70-7. 62 (3H, m), 7. 31-7. 23 (3H, m), 4. 40-4. 23 (1H, m), 4. 24 (2H, s), 2. 61 (3H, s), 2. 34-2. 14 (2H, m), 1. 99-1. 72 (4H, m), 1. 66-1. 54 (1H, m), 1. 46-1. 30 (1H, m), 1. 27-1. 08 (2H, m)	
Purity	>90% (NMR)			
MS	542 (M+1)		1	

Example No.	· .	454	1H NMR(δ) ppm
HO H	CI F O	F N O	300MHz, DMSO-d6 8. 27 (1H, d, J=1. 4Hz), 8. 05 (1H, d, J=8. 7Hz), 7. 92 (1H, d, J=8. 7Hz), 7. 7 9 (1H, d, J=7. 8Hz), 7. 59 (1H, t, J=8. 6Hz), 7. 55-7. 45 (4H, m), 7. 37 (1H, d, J=11. 4Hz), 7. 14 (1H, d, J=12. 1Hz), 7. 01 (1H, d, J=8. 6Hz), 5. 04 (2H, s), 4. 10 (1H, m), 3. 84 (2H, t, J=6. 9Hz), 2. 55-2. 45 (2H, m), 2. 40-2. 10 (4H, m), 2. 00-1. 80 (4H, m), 1. 75-1. 55 (
Purity	>90% (N	MR)	1H, m), 1.50-1.20(3H, m)
MS	656 (M+1)	)	

Table 263

Example No	5. 45	1H NMR(δ 300MHz, DM
но	HCI F O NH	10.05(1H, z), 8.19(1 d, J=8.7Hz 7.50-7.41 ), 7.17(1H .05(1H, dd 2H, s), 4.1 40-2.10(2 1.75-1.55
Purity	>90% (NMR)	m)
MS	648 (M+1)	

10

15

20

25

30

35

40

45

50

55

1H NMR(δ) ppm 300MHz, DMSO-d6 10.05(1H, brs), 8.32(1H, d, J=1.3H z), 8.19(1H, d, J=8.8Hz), 8.01(1H, d, J=8.7Hz), 7.67(1H, t, J=8.6Hz), 7.50-7.41(5H, m), 7.38-7.33(2H, m ), 7.17(1H, dd, J=2.2Hz, 12.2Hz), 7 .05(1H, dd, J=2.2Hz, 8.7Hz), 5.10( 2H, s), 4.12(1H, m), 3.07(3H, s), 2. 40-2.10(2H, m), 2.00-1.80(4H, m), 1.75-1.55(1H, m), 1.50-1.20(3H, m)

Example No	. 456	1H NMR(δ) ppm 300MHz, DMSO-d6
но Но Но	HCI CI CI N N N N N N N N N N N N N N N N	8. 31 (1H, d, J=1.4 =8. 8Hz), 8. 00 (1H Hz), 7. 73 (1H, d, J , t, J=8. 6Hz), 7. 5 , 8. 3Hz), 7. 50-7. H, d, J=8. 3Hz), 7. z), 7. 06 (1H, dd, J . 11 (2H, s), 4. 100 ), 3. 03 (3H, s), 2.
Purity	>90% (NMR)	. 00-1. 80 (4H, m), . 1. 50-1. 20 (3H, m
MS	662 (M+1)	

300MHz, DMSO-d6
8. 31 (1H, d, J=1. 4Hz), 8. 17 (1H, d, J=8. 8Hz), 8. 00 (1H, dd, J=1. 5Hz, 8. 7 Hz), 7. 73 (1H, d, J=2. 3Hz), 7. 66 (1H, t, J=8. 6Hz), 7. 56 (1H, dd, J=2. 3Hz), 8. 3Hz), 7. 50-7. 47 (4H, m), 7. 42 (1H, d, J=8. 3Hz), 7. 19 (1H, d, J=12. 2Hz), 7. 06 (1H, dd, J=2. 2Hz, 8. 6Hz), 5. 11 (2H, s), 4. 10 (1H, m), 3. 31 (3H, s), 3. 03 (3H, s), 2. 40-2. 10 (2H, m), 2. 00-1. 80 (4H, m), 1. 75-1. 55 (1H, m), 1. 50-1. 20 (3H, m)

Example No.		457	1H NMR(δ) 300MHz, DMS
HO HC	CI		8. 41 (1H, d, 8. 10 (1H, d, =8. 8Hz), 7. I (1H, dd, J= 49 (4H, m), 7. 2Hz), 7. 05 ), 5. 18 (2H, . 62 (2H, t, J, m), 2. 11-2
Purity	>90% (NMR)	•	4H, m), 1.64 m)
MS	639 (M+1)		

300MHz, DMSO-d6
8. 41 (1H, d, J=8. 8Hz), 8. 28 (1H, s),
8. 10 (1H, d, J=9. 2Hz), 7. 96 (1H, d, J=8. 8Hz), 7. 87 (1H, d, J=8. 8Hz), 7. 6
1 (1H, dd, J=8. 5Hz, 8. 5Hz), 7. 56-7.
49 (4H, m), 7. 19 (1H, dd, J=2. 4Hz, 12.
2Hz), 7. 05 (1H, dd, J=2. 4Hz, 8. 7Hz.), 5. 18 (2H, s), 4. 06-3. 97 (4H, m), 2.
62 (2H, t, J=8. 1Hz), 2. 28-2. 15 (2H, m), 2. 11-2. 01 (4H, m), 1. 91-1. 87 (4H, m), 1. 64 (1H, m), 1. 43-1. 23 (3H, m)

ppm

Table 264

Example No	. 45	8 1H NMR(δ) ppm 300MHz, DMSO-d6
НО	HCI CI N-N-H	10. 19 (1H, s), 8. 29 (1H, s), 8. 14 (1 H, d, J=8. 8Hz), 7. 98 (1H, dd, J=1. 7H z, 8. 7Hz), 7. 90 (1H, d, J=2.2Hz), 7. 69 (1H, dd, J=2. 2Hz, 8. 4Hz), 7. 64 (1 H, dd, J=8. 5Hz, 8. 5Hz), 7. 50-7. 42 (4H, m), 7. 32 (1H, d, J=8. 4 Hz), 7. 14 (1H, dd, J=2. 5Hz, 12. 1Hz), 7. 02 (1H, dd, J=2. 4Hz, 8. 6Hz), 5. 08 (2H, s), 4. 17-4. 02 (1H, m), 2. 30-2. 18 (2H, m)
Purity	>90% (NMR)	), 2. 08 (3H, s), 1. 87-1. 79 (4H, m), 1 . 68-1. 59 (1H, m), 1. 35-1. 23 (3H, m)
MS .	612(M+1)	

Example No.	1H NMR(δ) ppm 300MHz, DMSO-d6
HCI CI N-N-N-N-	8. 29 (1H. s), 8. 11 (1H, d, J=8. 8Hz), 7. 96 (1H, d, J=8. 6Hz), 7. 64-7. 58 (2 H, m), 7. 51 (4H, s), 7. 44 (2H, s), 7. 1 5 (1H, d, J=12. 2Hz), 7. 02 (1H, d, J=8 . 5H), 5. 14 (2H, s), 4. 12-3. 95 (1H, m), 3. 70 (2H, q, J=7. 1Hz), 2. 50 (3H, s), 2. 31-2. 12 (2H, m), 1. 92-1. 82 (4 H, m), 1. 69-1. 57 (1H, m), 1. 43-1. 16 (3H, m), 1. 05 (3H, t, J=7. 1Hz)
Purity >90% (NMR)	(611, 117, 11. 05 (511, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,
MS 640 (M+1)	

Example No.	4	60 -1H NMR(δ) ppm .300MHz, DMSO-d6
HO	HCI CI	8. 28 (1H, s), 8. 09 (1H, d, J=8. 8Hz), 7. 95 (1H, d, J=10. 1Hz), 7. 64-7. 56 ( 2H, m), 7. 51 (4H, ws), 7. 44 (2H, s), 7 . 14 (1H, d, J=12. 2Hz), 7. 01 (1H, d, J =8. 6Hz), 5. 14 (2H, s), 4. 12-3. 95 (1 H, m), 3. 64 (2H, t, J=7. 2Hz), 2. 50 (3 H, s), 2. 31-2. 12 (2H, m), 1. 93-1. 84 (4H, m), 1. 69-1. 59 (1H, m), 1. 52-1. 17 (5H, m), 0. 84 (3H, t, J-7. 3Hz)
Purity	>90% (NMR)	
MS	654 (M+1)	

Table 265

Example No.	. 461	IR(δ) ppm Iz, DMSO-d6
HCI CI N F O	8. 30 (7. 99 (7. 62 (H, m), H, dd, J=2 07 (1H 05 (3H 1. 80 (	1H, s), 8. 13 (1H, d, J=8. 8Hz), 1H, d, J=8. 8Hz), 7. 69 (1H, s), 1H, t, J=8. 4Hz), 7. 96-7. 50 (4 7. 45 (1H, d, J=8. 7Hz), 7. 17 (1 J=2. 3Hz, 12. 0Hz), 7. 05 (1H, d . 2Hz, 8. 7Hz), 5. 14 (2H, s), 4. 4. m), 3. 73 (2H, q, J=7. 2Hz), 3. , s), 2. 40-2. 10 (2H, m), 2. 00-4H, m), 1. 75-1. 55 (1H, m), 1. 5 0 (3H, m), 1. 06 (3H, t, J=7. 2Hz)
Purity > 90% (N)		
MS 676 (M+1)		

Example No.		462	1H NMR(δ) ppm 300MHz, DMSO-d6
HO	HCI F O O S	<u>'</u> `>	8. 30 (1H, s), 8. 13 (1H, d, J=8. 7Hz), 7. 98 (1H, d, J=8. 7Hz), 7. 70 (1H, d, J=1. 8Hz), 7. 63 (1H, t, J=8. 4Hz), 7. 5 5-7. 50 (5H, m), 7. 43 (1H, d, J=8. 1Hz), 7. 15 (1H, d, J=12. 0Hz), 7. 02 (1H, d, J=8. 7Hz), 5. 13 (2H, s), 4. 07 (1H, m), 3. 65 (2H, t, J=6. 6Hz), 3. 03 (3H, s), 2. 40-2. 10 (2H, m), 2. 00-1. 75 (4H, m), 1. 70-1. 60 (1H, m), 1. 50-1. 20
Purity	>90% (NMR)	•	(5H, m), 0.87(3H, t, J=7.5Hz)
MS	690 (M+1)		]

Example No	. 463	1H. NMR(δ) ppm 300MHz, DMSO-d6
HO	ICI F O N	8. 29 (1H, s), 8. 11 (1H, d, J=8. 5Hz), 7. 97 (1H, d, J=9. 9Hz), 7. 65 (1H, br) , 7. 61 (1H, d, J=8. 4Hz), 7. 53-7. 42 ( 6H, m), 7. 16 (1H, dd, J=2. 2Hz, 12. 1H z), 7. 03 (1H, dd, J=2. 0Hz, 9. 0Hz), 5 .12 (2H, s), 4. 04-4. 00 (1H, m), 3. 24 (3H, s), 2. 20 (2H, m), 1. 87 (7H, m), 1 .64 (1H, m), 1. 41-1. 28 (3H, m)
Purity	>90% (NMR)	
MS	626 (M+1)	

Table 266

Example No.	).	464	1H NMR(δ) ppm 300MHz, DMSO-d6
но	HCI F O	0 // 0	8. 28 (1H, s), 8. 09 (1H, d, J=8. 8Hz), 7. 95 (1H, d, J=8. 8Hz), 7. 73 (1H, d, J=2. 2Hz), 7. 63-7. 39 (7H, m), 7. 15 (1H, dd, J=2. 0Hz, 12. 1Hz), 7. 01 (1H, dd, J=2. 0Hz, 8. 6Hz), 5. 10 (2H, s), 4. 05-3. 99 (1H, m), 3. 34 (3H, s), 3. 23 (2H, q, J=7. 2Hz), 2. 20 (2H, m), 1. 87 (4H, m), 1. 62 (1H, m), 1. 33 (3H, m), 1. 24 (3H, t, J=7. 3Hz)
Purity	>90% (NMR)		1
MS	676 (M+1)		

Example	No.	465	1H NMR(δ) ppm
но	HCI F O N	0 S=0	300MHz, DMSO-d6 8. 29 (1H, d, J=1. 5Hz), 8. 11 (1H, d, J=8. 8Hz), 7. 98 (1H, dd, J=1. 4Hz, 8. 4Hz), 7. 69 (1H, d, J=2. 2Hz), 7. 62 (1H, dd, J=8. 6Hz), 7. 56-7. 47 (5H, m), 7. 43 (1H, d, J=8. 1Hz), 7. 16 (1H, dd, J=2. 2Hz, 12. 1Hz), 7. 0 2 (1H, dd, J=2. 4Hz, 8. 7Hz), 5. 13 (2. H, s), 4. 09-4. 02 (1H, m), 3. 77 (2H, dd, J=2. 4Hz, R, J=2. 4Hz, R, J=2. 4Hz, R, J=3. 77 (2H, J=3. 24 (1H, m), 3. 74 (2H, J=3. 24 (1H, m), 3. 74 (2H, J=3. 24 (1H, m), 3. 74 (2H, J=3. 24 (1H, m), 3. 74 (2H, J=3. 24 (1H, m), 3. 74 (2H, J=3. 24 (1H, m), 3. 74 (2H, J=3. 24 (1H, m), 3. 74 (2H, J=3. 24 (1H, m), 3. 74 (2H, J=3. 24 (1H, J=3. 2
Purity	>90% (NMR)		q, J=6.8Hz), 3.19(2H, q, J=7.4Hz)
MS	690 (M+1)		, 2. 25-2. 21 (2H, m), 1. 90-1. 87 (4H, m), 1. 63 (1H, m), 1. 39-1. 33 (3H, m), 1. 27 (3H, t, J=7. 4Hz), 1. 06 (3H, t, J=6. 9Hz)

Example No.	466	1H NMR(δ) ppm
HO HO	CI CI N P O N O	300MHz, DMSO-d6 8. 28 (1H, s), 8. 10 (1H, d, J=8. 4Hz), 7. 96 (1H, d, J=8. 4Hz), 7. 64 (1H, s), 7. 61 (1H, d, J=8. 4Hz), 7. 50 (4H, s), 7. 44 (2H, s), 7. 14 (1H, d, J=12. 0Hz), 7. 02 (1H, d, J=8. 4Hz), 5. 12 (2H, s), 4. 12-3. 95 (1H, m), 3. 23 (3H, s), 2. 32-2. 06 (4H, m), 1. 94-1. 77 (4H, m), 1. 70-1. 59 (1H, m), 1. 42-1. 18 (3H, m), 0. 96 (3H, t, J=7. 2Hz)
Purity	>90% (NMR)	
MS	640 (M+1)	1 .

Table 267

Example No. 467		1H NMR(δ) ppm 300MHz, DMSO-d6
НО	HCI F O N O	8. 28 (1H, s), 8. 08 (1H, d, J=8. 7H z), 7. 95 (1H, d, J=8. 4Hz), 7. 60 (1H, t, J=8. 4Hz), 7. 59 (1H, s), 7. 51 (4H, s), 7. 45 and 7. 42 (2H, ABq, J=8. 1Hz), 7. 14 (1H, d, J=12. 0H z), 7. 00 (1H, d, J=8. 4Hz), 5. 14 (2H, s), 4. 12-3. 95 (1H, m), 3. 70 (2H, q, J=6. 9Hz), 2. 30-1. 98 (4H, m), 1. 94-1. 79 (4H, m), 1. 69-1. 5
Purity	>90% (NMR)	9(1H, m), 1.45-1.17(3H, m), 1.0 5(3H, t, J=6.9Hz), 0.94(3H, t, J
MS	. 654 (M+1)	=7. 5Hz)

Example No	o. 468	1H NMR(δ) ppm
но	F CI	400MHz, DMSO-d6 8. 25 (1H, s), 7. 96 (1H, d, J=8. 8Hz), 7. 90 (1H, d, J=8. 8Hz), 7. 55 ( 1H, t, J=8. 4Hz), 7. 46 (2H, d, J=8. 7Hz), 7. 41 (2H, d, J=8. 7Hz), 7. 10-7. 00 (2H, m), 6. 98 (1H, dd, J=2. 2Hz, 8. 7Hz), 5. 05 (2H, s), 3. 9 8 (1H, m), 3. 84 (3H, s), 2. 30-2. 1 0 (2H, m), 1. 90-1. 75 (4H, m), 1. 7 0-1. 60 (1H, m), 1. 50-1. 20 (3H, m)
Purity	>9.0% (NMR)	)
MS	585 (M+1)	

Example No.	469	1H NMR(δ) ppm 400MHz, DMSO-d6
HO HC		8. 26 (1H, s), 8. 02 (1H, d, J=8. 8H z), 7. 93 (1H, d, J=8. 8Hz), 7. 60-7. 50 (6H, m), 7. 45 (1H, d, J=8. 7Hz), 7. 08 (1H, dd, J=2. 3Hz, 12. 0Hz), 6. 97 (1H, dd, J=2. 2Hz, 8. 7Hz), 5. 18 (2H, s), 4. 85 (1H, sept, J=6. 6Hz), 3. 98 (1H, m), 2. 40-2. 10 (2H, m), 2. 00-1. 80 (4H, m), 1. 75-1. 55 (4H, m), 1. 50-1. 20 (3H, m)
Purity	>90% (NMR)	), 1. 02 (6H, d, J=6. 6Hz)
MS	654 (M+1)	

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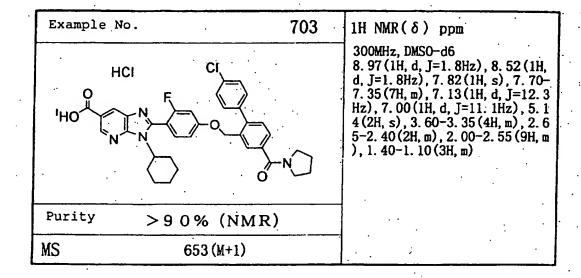
Table 268

Example No.	47	1H NMR(δ) ppm 300MHz, DMSO-d6
HO OH	CI N N	8. 39 (1H, d, J=1. 4Hz), 8. 04 (1H, J=8. 8Hz), 7. 98 (1H, d, J=2. 2Hz). 95 (1H, d, J=8. 8Hz), 7. 78 (1H, d J=2. 3Hz, 8. 5Hz), 7. 57 (1H, t, J=6Hz), 7. 50 (2H, d, J=8. 8Hz), 7. 42 (2H, d, J=8. 8Hz), 7. 39 (1H, d, J=8. 4Hz), 7. 10 (1H, d, J=12. 1Hz), 6. 98 (1H, d, J=8. 6Hz), 5. 65-5. 60 (2H, f, 5. 35 (1H, d, J=4. 2Hz), 5. 08 (2H, f, 5. 35 (1H, f, 5. 35 (1H, f, 5. 35 (1
Purity	>90% (NMR)	), 4. 00 (1H, m), 3. 93-3. 84 (3H, m) 3. 50-3. 30 (4H, m) 2. 54 (2H, t, J=7
MS	814 (M+1)	8Hz), 2. 40-2. 00 (4H, m), 1. 95-1. 5 (4H, m), 1. 70-1. 55 (1H, m), 1. 45 1. 15 (3H, m)

Example No. 471	1H NMR(δ) ppm 300MHz, DMSO-d6
HO N O	12. 78 (1H, brs), 8. 30 (1H, dd, J=0. 9Hz, 1. 5Hz), 8. 22 (1H, d, J=1. 5Hz), 7. 95 (1H, d, J=1. 8Hz), 7. 94 (1H, d, J=8. 4Hz), 7. 85 (1H, dd, J=1. 2Hz, 8. 4Hz), 6. 96 (1H, dd, J=0. 9Hz, 1. 8 Hz), 4. 46 (1H, m), 2. 40-2. 10 (2H, m), 2. 00-1. 20 (8H, m)
Purity > 90% (NMR)	
MS 311 (M+1)	

Table 269

Example No.	702	1H NMR(δ) ppm
HCI HONN F	CI HZ	300MHz, DMSO-d6 8. 97 (1H, d, J=1. 8Hz), 8. 52 (1H, d, J=2. 4Hz), 8. 36 (1H, d, J=7. 8Hz), 8. 16 (1H, s), 7. 96 (!H, d, J=8. 1Hz), 7. 55-7. 40 (5H, m), 7. 14 (1H, d, J=12. 6Hz), 7. 01 (1H, dd, J=8. 4Hz, 1. 8Hz), 5. 11 (2H, s), 4. 20-3. 95 (2H, m), 2. 65-2. 45 (2H, m), 1. 95-1. 80 (5H, m), 1. 20-1. 10 (3H, m)
Purity >90	% (NMR)	
MS 6	41 (M+1)	7



#### Industrial Applicability

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[0393] As is evident from the above-mentioned results, the compound of the present invention shows a high inhibitory activity against HCV polymerase.

[0394] Therefore, the compound of the present invention can provide a pharmaceutical agent effective for the prophylaxis or treatment of hepatitis C, based on the anti-HCV effect afforded by the HCV polymerase inhibitory activity. When used concurrently with a different anti-HCV agent, such as interferon, and/or an anti-inflammatory agent and the like, it can provide a pharmaceutical agent more effective for the prophylaxis or treatment of hepatitis C. Its high inhibitory activity specific to HCV polymerase suggests the possibility of the compound being a pharmaceutical agent with slight side effects, which can be used safely for humans.

[0395] This application is based on patent application Nos. 193786/2001 and 351537/2001 filed in Japan, the contents of which are hereby incorporated by reference.

#### Claims

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1. A therapeutic agent for hepatitis C, which comprises a fused ring compound of the following formula [I] or a pharmaceutically acceptable salt thereof as an active ingredient:

 $G^{2} \cdot G^{1} \cdot G^{8} \cdot G^{7} \cdot G^{6} \cdot G^{5} \cdot G^{6$ 

wherein

a broken line is a single bond or a double bond,  $G^1$  is  $C(-R^1)$  or a nitrogen atom,  $G^2$  is  $C(-R^2)$  or a nitrogen atom, is  $C(-R^3)$  or a nitrogen atom,

is C(-R<sup>3</sup>) or a nitrogen atom, G<sup>4</sup> is C(-R<sup>4</sup>) or a nitrogen atom,

25 G<sup>5</sup>, G<sup>6</sup>, G<sup>8</sup> and G<sup>9</sup> are each independently a carbon atom or a nitrogen atom, is C(-R<sup>7</sup>) an oxygen atom, a sulfur otom or a nitrogen atom.

is C(-R<sup>7</sup>), an oxygen atom, a sulfur atom, or a nitrogen atom optionally substituted by R<sup>8</sup>,

wherein R1, R2, R3 and R4 are each independently,

30 (1) hydrogen atom,

(2) C<sub>1-6</sub> alkanoyl,

(3) carboxyl,

(4) cyano,

(5) nitro,

(6)  $C_{1-6}$  alkyl optionally substituted by 1 to 3 substituent(s) selected from the following group A, group A; halogen atom, hydroxyl group, carboxyl, amino,  $C_{1-6}$  alkoxy,  $C_{1-6}$ 

(7)

-COORa1

wherein  $R^{a1}$  is optionally substituted  $C_{1-6}$  alkyl (as defined above),  $C_{6-14}$  aryl  $C_{1-6}$  alkyl optionally substituted by 1 to 5 substituent(s) selected from the following group B or glucuronic acid residue, group B; halogen atom, cyano, nitro,  $C_{1-6}$  alkyl, halogenated  $C_{1-6}$  alkyl,  $C_{1-6}$  alkanoyl, -  $(CH_2)_r$ - $COR^{b1}$ , - $(CH_2)_r$ - $CONR^{b1}R^{b2}$ , - $(CH_2)_r$ - $NR^{b1}R^{b2}$ , - $(CH_2)_r$ - $NR^{b1}COR^{b2}$ , - $(CH_2)_r$ - $NHSO_2R^{b1}$ , - $(CH_2)_r$ - $OR^{b1}$ , - $(CH_2)_r$ - $SO_2R^{b1}$  and - $(CH_2)_r$ - $SO_2NR^{b1}R^{b2}$  wherein  $R^{b1}$  and  $R^{b2}$  are each independently hydrogen atom or  $C_{1-6}$  alkyl and r is 0 or an integer of 1 to 6,

-CONR<sup>a2</sup>R<sup>a3</sup>

wherein  $R^{a2}$  and  $R^{a3}$  are each independently hydrogen atom,  $C_{1-6}$  alkoxy or optionally substituted  $C_{1-6}$  alkyl (as defined above),

(9)

### -C (=NR<sup>84</sup>)NH<sub>2</sub>

wherein Ra4 is hydrogen atom or hydroxyl group,

(10)

-NHR<sup>a5</sup>

wherein  $R^{a5}$  is hydrogen atom,  $C_{1-6}$  alkanoyl or  $C_{1-6}$  alkylsulfonyl, (11)

-OR<sup>a6</sup>

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wherein  $R^{a6}$  is hydrogen atom or optionally substituted  $C_{1-6}$  alkyl(as defined above), (12) -SO $_2$ R $^{a7}$ 

wherein  $R^{a7}$  is hydroxyl group, amino,  $C_{1-6}$  alkyl or  $C_{1-6}$  alkylamino,

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wherein  $R^{a31}$  is hydrogen atom, optionally substituted  $C_{1-6}$  alkyl (as defined above) or  $C_{6-14}$  aryl  $C_{1-6}$  alkyl optionally substituted by 1 to 5 substituent(s.) selected from the above group B

(14) heterocyclic group having 1 to 4 heteroatom(s) selected from an oxygen atom, a nitrogen atom and a sulfur atom, and

 $R^7$  and  $R^8$  are each hydrogen atom or optionally substituted  $C_{1.6}$  alkyl (as defined above),

ring Cy is

(1)  $C_{3-8}$  cycloalkyl optionally substituted by 1 to 5 substituent(s) selected from the following group C, group C; hydroxyl group, halogen atom,  $C_{1-6}$  alkoxy,

(2)  $C_{3-8}$  cycloalkenyl optionally substituted by 1 to 5 substituent(s) selected from the above group C, or (3)

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wherein u and v are each independently an integer of 1 to 3,

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ring A is

- (1) C<sub>6-14</sub> aryl,
- (2) C<sub>3-8</sub> cycloalkyl,
- (3) C<sub>3-8</sub> cycloalkenyl or
- (4) heterocyclic group having 1 to 4 heteroatom(s)

selected from an oxygen atom, a nitrogen atom and a sulfur atom,

R5 and R6 are each independently (1) hydrogen atom, (2) halogen atom, 5 (3) optionally substituted C<sub>1-6</sub> alkyl (as defined above) or (4) -OR<sup>a8</sup> 10 wherein  $\rm R^{a8}$  is hydrogen atom,  $\rm C_{1-6}$  alkyl or  $\rm C_{6-14}$  aryl  $\rm C_{1-6}$  alkyl, and Χ is 15 (1) hydrogen atom, (2) halogen atom, (3) cyano, (4) nitro, (5) amino, C<sub>1-6</sub> alkanoylamino, 20 (6) C<sub>1-6</sub> alkylsulfonyl, (7) optionally substituted  $C_{1-6}$  alkyl (as defined above), (8) C<sub>2-6</sub> alkenyl optionally substituted by 1 to 3 substituent(s) selected from the above group A, 25 -COOR<sup>a9</sup> wherein  $\mathsf{R}^{\mathsf{a}\mathsf{9}}$  is hydrogen atom or  $\mathsf{C}_{\mathsf{1-6}}$  alkyl, (10)30 -CONH-(CH<sub>2</sub>)<sub>I</sub>-R<sup>a10</sup> wherein  $R^{a10}$  is optionally substituted  $C_{1-6}$  alkyl (as defined above),  $C_{1-6}$  alkoxycarbonyl or  $C_{1-6}$ 35 alkanoylamino and I is 0 or an integer of 1 to 6, (11)-OR<sup>a11</sup> 40 wherein  $R^{a11}$  is hydrogen atom or optionally substituted  $C_{1-6}$  alkyl (as defined above) or (12)45 50 wherein ring B is (1') C<sub>6-14</sub> aryl, (2') C<sub>3-8</sub> cycloalkyl or 55 (3') heterocyclic group (as defined above), each Z is independently

(1') a group selected from the following group D, (2') C<sub>6-14</sub> aryl optionally substituted by 1 to 5 substituent(s) selected from the following group (3') C<sub>3-8</sub> cycloalkyl optionally substituted by 1 to 5 substituent(s) selected from the following 5 (4')  $C_{6-14}$  aryl  $C_{1-6}$  alkyl optionally substituted by 1 to 5 substituent(s) selected from the following group D, (5') heterocyclic group optionally substituted by 1 to 5 substituent(s) selected from the following group D, 10 wherein the heterocyclic group has 1 to 4 hetero-atom(s) selected from an oxygen atom, a nitrogen atom and a sulfur atom, or (6') heterocycle C<sub>1-6</sub> alkyl optionally substituted by 1 to 5 substituent(s) selected from the following group D, wherein the heterocycle C<sub>1-6</sub> alkyl is C<sub>1-6</sub> alkyl substituted by heterocyclic group optionally 15 substituted by 1 to 5 substituent(s) selected from the group D, as defined above, group D: (a) hydrogen atom, (b) halogen atom, 20 (c) cyano, (d) nitro, (e) optionally substituted C<sub>1-6</sub> alkyl (as defined above), 25 -(CH<sub>2</sub>),-COR<sup>a18</sup>, (hereinafter each t means independently 0 or an integer of 1 to 6), wherein Ra18 is 30 (1") optionally substituted  $C_{1-6}$  alkyl (as defined above), (2")  $C_{6-14}$  aryl optionally substituted by 1 to 5 substituent(s) selected from the above group B or (3") heterocyclic group optionally substituted by 1 to 5 substituent(s) selected from 35 the above group B wherein the heterocyclic group has 1 to 4 heteroatom(s) selected from an oxygen atom, a nitrogen atom and a sulfur atom, (g) 40  $-(CH_2)_t$ -COOR $^{a19}$ wherein Ra19 is hydrogen atom, optionally substituted C1-6 alkyl (as defined above) or  $C_{6-14}$  aryl  $C_{1-6}$  alkyl optionally substituted by 1 to 5 substituent(s) selected from the 45 above group B, (h)  $-(CH_2)_t$ -CONR $^{a27}$ R $^{a28}$ 50 wherein Ra27 and Ra28 are each independently, (1") hydrogen atom, (2") optionally substituted  $C_{1-6}$  alkyl (as defined above), 55 (3") C<sub>6-14</sub> aryl optionally substituted by 1 to 5 substituent(s) selected from the above group B, (4") C<sub>6-14</sub> aryl C<sub>1-6</sub> alkyl optionally substituted by 1 to 5 substituent(s) selected from

the above group B, (5") heterocyclic group optionally substituted by 1 to 5 substituent(s) selected from the above group B, (6") heterocycle C<sub>1-6</sub> alkyl optionally substituted by 1 to 5 substituent(s) selected 5 from the above group B, wherein the heterocycle C<sub>1-6</sub> alkyl is C<sub>1-6</sub> alkyl substituted by heterocyclic group optionally substituted by 1 to 5 substituent(s) selected from the above group B, as defined above, (7") C<sub>3-8</sub> cycloalkyl optionally substituted by 1 to 5 substituent(s) selected from the 10 above group B, (8")  $C_{3-8}$  cycloalkyl  $C_{1-6}$  alkyl optionally substituted by 1 to 5 substituent(s) selected from the above group B, (9") hydroxyl group or (10") C<sub>1-6</sub> alkoxy, 15 (i) -(CH<sub>2</sub>)<sub>t</sub>-C(=NR<sup>a33</sup>)NH<sub>2</sub> 20 wherein Ra33 is hydrogen atom, C1-6 alkyl, hydroxyl group or C1-6 alkoxy, (j) -(CH<sub>2</sub>)<sub>t</sub>-OR<sup>a20</sup> 25 wherein Ra20 is (1") hydrogen atom. 30 (2") optionally substituted  $C_{1-6}$  alkyl (as defined above), (3") optionally substituted C<sub>2-6</sub> alkenyl (as defined above), (4") C<sub>2-6</sub> alkynyl optionally substituted by 1 to 3 substituent(s) selected from the above group A, (5")  $C_{6-14}$  aryl optionally substituted by 1 to 5 substituent(s) selected from the above 35 group B, (6")  $C_{6-14}$  aryl  $C_{1-6}$  alkyl optionally substituted by 1 to 5 substituent(s) selected from the above group B, (7") heterocyclic group optionally substituted by 1 to 5 substituent(s) selected from the above group B, 40 (8") heterocycle C<sub>1-6</sub> alkyl optionally substituted by 1 to 5 substituent(s) selected from the above group B, (9")  $C_{3-8}$  cycloalkyl optionally substituted by 1 to 5 substituent(s) selected from the above group B, or (10")  $C_{3-8}$  cycloalkyl  $C_{1-6}$  alkyl optionally substituted by 1 to 5 substituent(s) selected 45 from the above group B, (k) -(CH<sub>2</sub>)<sub>t</sub>-O-(CH<sub>2</sub>)<sub>p</sub>-COR<sup>a21</sup> 50

wherein  $R^{a21}$  is amino,  $C_{1-6}$  alkylamino or heterocyclic group optionally substituted by 1 to 5 substituent(s) selected from the above group B, and p is 0 or an integer of 1 to 6, (I)

 $-(CH_2)_t$ -NR $^{a22}$ R $^{a23}$ 

wherein Ra22 and Ra23 are each independently

- (1") hydrogen atom,
- (2") optionally substituted C<sub>1-6</sub> alkyl (as defined above),
- (3")  $C_{6-14}$  aryl optionally substituted by 1 to 5 substituent(s) selected from the above group B,
- (4")  $C_{6-14}$  aryl  $C_{1-6}$  alkyl optionally substituted by 1 to 5 substituent(s) selected from the above group B,
- (5") heterocycle  $C_{1-6}$  alkyl optionally substituted by 1 to 5 substituent(s) selected from the above group B or
- (6") heterocyclic group optionally substituted by 1 to 5 substituent(s) selected from the above group B,

(m)

-(CH<sub>2</sub>)<sub>1</sub>-NR<sup>a29</sup>CO-R<sup>a24</sup>

wherein  $R^{a29}$  is hydrogen atom,  $C_{1-6}$  alkyl or  $C_{1-6}$  alkanoyl, and  $R^{a24}$  is

- (1") amino,
- (2") C<sub>1-6</sub> alkylamino,
- (3") optionally substituted C<sub>1-6</sub> alkyl (as defined above),
- (4")  $C_{6-14}$  aryl optionally substituted by 1 to 5 substituent(s) selected from the above group B,
- (5") heterocyclic group optionally substituted by 1 to 5 substituent(s) selected from the above group B or
- (6") heterocycle  $C_{1-6}$  alkyl optionally substituted by 1 to 5 substituent(s) selected from the above group B,

(n)

-(CH<sub>2</sub>)<sub>t</sub>-NR<sup>a29</sup>SO<sub>2</sub>-R<sup>a25</sup>

wherein  $R^{a29}$  is as defined above, and  $R^{a25}$  is hydrogen atom, optionally substituted  $C_{1-6}$  alkyl (as defined above),  $C_{6-14}$  aryl optionally substituted by 1 to 5 substituent (s) selected from the above group B or heterocyclic group optionally substituted by 1 to 5 substituent(s) selected from the above group B, (o)

-(CH<sub>2</sub>)<sub>t</sub>-S(O)<sub>0</sub>-R<sup>a25</sup>

wherein Ra25 is as defined above, and q is 0, 1 or 2,

(p)

and

-(CH<sub>2</sub>)<sub>t</sub>-SO<sub>2</sub>-NHR<sup>a26</sup>

wherein  $R^{a26}$  is hydrogen atom, optionally substituted  $C_{1-6}$  alkyl (as defined above),  $C_{6-14}$  aryl optionally substituted by 1 to 5 substituent(s) selected from the above group B or heterocyclic group optionally substituted by 1 to 5 substituent(s) selected from the above group B,

(q) heterocyclic group having 1 to 4 heteroatom(s) selected from an oxygen atom, a nitrogen atom and a sulfur atom, and

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w is an integer of 1 to 3, and Y is (1') a single bond, 5 (2') C<sub>1-6</sub> alkylene, (3') C<sub>2-6</sub> alkenylene, (4') -(CH<sub>2</sub>)<sub>m</sub>-O-(CH<sub>2</sub>)<sub>n</sub>-, (hereinafter m and n are each independently 0 or an integer of 1 to 6), (5') 10 -CO-, (6') 15 -CO<sub>2</sub>-(CH<sub>2</sub>)<sub>n</sub>-, (7') 20 -CONH- (CH<sub>2</sub>)<sub>n</sub>-NH-, (8') 25 -NHCO<sub>2</sub>-, (9') 30 -NHCONH-, (10') 35 -O-(CH<sub>2</sub>)<sub>n</sub>-CO-, (11')40 -O-(CH<sub>2</sub>)<sub>n</sub>-O-, (12')45 -SO<sub>2</sub>-, (13')50  $-(CH_2)_m$ -NR<sup>a12</sup>- $(CH_2)_n$ wherein Ra12 is 55 (1") hydrogen atom, (2") optionally substituted  $C_{1-6}$  alkyl (as defined above), (3")  $C_{6-14}$  aryl  $C_{1-6}$  alkyl optionally substituted by 1 to 5 substituent(s) selected from the

	above group B, $(4") C_{6-14}$ aryl optionally substituted by 1 to 5 substituent(s) selected from the above group B, $(5")$
5	-COR <sup>b5</sup>
. 10	wherein $R^{b5}$ is hydrogen atom, optionally substituted $C_{1-6}$ alkyl (as defined above), $C_{6-14}$ aryl optionally substituted by 1 to 5 substituent(s) selected from the above group B or $C_{6-14}$ aryl $C_{1-6}$ alkyl optionally substituted by 1 to 5 substituent(s) selected from the above group B, (6")
15	-COOR <sup>b5</sup> (R <sup>b5</sup> is as defined above) or (7")
20	-SO <sub>2</sub> R <sup>b5</sup>
25	(R <sup>b5</sup> is as defined above), (14')
	-NR <sup>a12</sup> CO-
30	(R <sup>a12</sup> is as defined above), (15')
	-CONR <sup>a13</sup> -(CH <sub>2</sub> ) <sub>n</sub> -
35	wherein $R^{a13}$ is hydrogen atom, optionally substituted $C_{1-6}$ alkyl (as defined above) or $C_{6-14}$ aryl $C_{1-6}$ alkyl optionally substituted by 1 to 5 substituent(s) selected from the above group B, (16')
40	-CONH-CHR <sup>a14</sup> -
	wherein $R^{a14}$ is $C_{6-14}$ aryl optionally substituted by 1 to 5 substituent(s) selected from the above group B, (17')
45	-O-(CH <sub>2</sub> ) <sub>m</sub> -CR <sup>a15</sup> R <sup>a16</sup> -(CH <sub>2</sub> ) <sub>n</sub> -
50	wherein R <sup>a15</sup> and R <sup>a16</sup> are each independently
	(1") hydrogen atom, (2") carboxyl, (3") C <sub>1-6</sub> alkyl,
55	(4") -OR <sup>b6</sup> wherein R <sup>b6</sup> is C <sub>1-6</sub> alkyl or C <sub>6-14</sub> aryl C <sub>1-6</sub> alkyl, or (5")

### -NHR<sup>b7</sup>

wherein  $R^{b7}$  is hydrogen atom,  $C_{1-6}$  alkyl,  $C_{1-6}$  alkanoyl or  $C_{6-14}$  aryl  $C_{1-6}$  alkyloxycarbonyl, or  $R^{a15}$  is optionally (6")

$$-(CH2)n - (Z')W$$

wherein n', ring B', Z' and w' are the same as the above-mentioned n, ring B, Z and w, respectively, and may be the same as or different from the respective counterparts,

(18')

or

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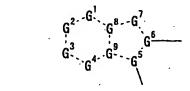
( $R^{a12}$  and  $R^{a15}$  are each as defined above), (19')

wherein  $R^{a17}$  is hydrogen atom or  $C_{1-6}$  alkyl, (20')

(e is 0, 1 or 2, Ra15 and Ra16 are each as defined above),

(21') -(CH<sub>2</sub>)<sub>m</sub>-CR<sup>a15</sup>Ra<sup>16</sup>-(CH<sub>2</sub>)<sub>n</sub>- (Ra<sup>15</sup> and Ra<sup>16</sup> are each as defined above).

- 2. The therapeutic agent of claim 1, wherein 1 to 4 of the G<sup>1</sup>, G<sup>2</sup>, G<sup>3</sup>, G<sup>4</sup>, G<sup>5</sup>, G<sup>6</sup>, G<sup>7</sup>, G<sup>8</sup> and G<sup>9</sup> is (are) a nitrogen atom.
- 3. The therapeutic agent of claim 2, wherein  $G^2$  is  $C(-R^2)$  and  $G^6$  is a carbon atom.
- 4. The therapeutic agent of claim 2 or claim 3, wherein G<sup>5</sup> is a nitrogen atom.
- 5. The therapeutic agent of claim 1, wherein, in formula [I], the moiety



is a fused ring selected from

$$\begin{array}{c|c}
R^2 & R^1 \\
R^3 & N & R^2 & N \\
R^3 & R^4 & R^4 & And & R^4
\end{array}$$

6. The therapeutic agent of claim 5, wherein, in formula [I], the moiety

is a fused ring selected from

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7. The therapeutic agent of claim 6, which comprises a fused ring compound of the following formula [I-1]

wherein each symbol is as defined in claim 1, or a pharmaceutically acceptable salt thereof as an active ingredient.

30 8. The therapeutic agent of claim 6, which comprises a fused ring compound of the following formula [I-2]

wherein each symbol is as defined in claim 1, or a pharmaceutically acceptable salt thereof as an active ingredient.

9. The therapeutic agent of claim 6, which comprises a fused ring compound of the following formula [I-3]

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wherein each symbol is as defined in claim 1, or a pharmaceutically acceptable salt thereof as an active ingredient.

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10. The therapeutic agent of claim 6, which comprises a fused ring compound of the following formula [I-4]

20 [1-4]25

wherein each symbol is as defined in claim 1, or a pharmaceutically acceptable salt thereof as an active ingredient.

11. The therapeutic agent of any of claims 1 to 10, wherein at least one of R1, R2, R3 and R4 is carboxyl, -COORa1, 35 -CONR<sup>a2</sup>Ra3, -SO<sub>2</sub>Ra7 (wherein Ra1, Ra2, Ra3 and Ra7 are as defined in claim 1),

- 45 12. The therapeutic agent of claim 11, wherein at least one of R1, R2, R3 and R4 is carboxyl, -COORa1, -CONRa2Ra3 or -SO<sub>2</sub>Ra7 wherein Ra1, Ra2, Ra3 and Ra7 are as defined in claim 1.
  - 13. The therapeutic agent of any of claims 1 to 10, wherein at least one of R1, R2, R3 and R4 is -COORa1 wherein Ra1 is glucuronic acid residue.
  - 14. The therapeutic agent of any of claims 1 to 10, wherein at least one of R1, R2, R3 and R4 is heterocyclic group having 1 to 4 heteroatom(s) selected from an oxygen atom, a nitrogen atom and a sulfur atom.
  - 15. The therapeutic agent of any of claims 1 to 14, wherein the ring Cy is cyclopentyl, cyclohexyl, cycloheptyl, tetrahydrothiopyranyl or piperidino.
    - 16. The therapeutic agent of any of claims 1 to 14, wherein the ring Cy is

wherein each symbol is as defined in claim 1.

- 10 17. The therapeutic agent of any of claims 1 to 16, wherein the ring A is  $C_{6-14}$  aryl.
  - 18. The therapeutic agent of any of claims 1 to 17, wherein at least one substituent optionally substituted by group A is a substituent substituted by C<sub>1-6</sub> alkoxy C<sub>1-6</sub> alkoxy.
- 15 19. The therapeutic agent of any of claims 1 to 18, wherein the Y is -(CH<sub>2</sub>)<sub>m</sub>-CR<sup>a15</sup>Ra<sup>16</sup>-(CH<sub>2</sub>)<sub>n</sub>- wherein each symbol is as defined in claim 1.
  - 20. The therapeutic agent of any of claims 1 to 19, wherein at least one group represented by Z is heterocycle  $C_{1-6}$  alkyl optionally substituted by 1 to 5 substituent(s) selected from the group D.
  - 21. The therapeutic agent of any of claims 1 to 19, wherein at least one group represented by Z is a heterocyclic group optionally substituted by 1 to 5 substituent(s) selected from the group D, wherein said heterocyclic group is selected from the following groups:

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$$-N \xrightarrow{h} 0 \qquad -N \xrightarrow{h} s = 0 \qquad -N \xrightarrow{h} s = 0$$

$$\begin{array}{c|c}
 & R^{a35} \\
 & R^{a35}
\end{array}$$
and
$$\begin{array}{c|c}
 & R^{a35} \\
 & R^{a35}
\end{array}$$

wherein E<sup>1</sup> is an oxygen atom, a sulfur atom or N(-R<sup>a35</sup>), E<sup>2</sup> is an oxygen atom, CH<sub>2</sub> or N(-R<sup>a35</sup>), E<sup>3</sup> is an oxygen atom or a sulfur atom,

wherein each  $R^{a35}$  is independently hydrogen atom or  $C_{1-6}$  alkyl, f is an integer of 1 to 3, and h and h' are the same or different and each is an integer of 1 to 3.

22. The therapeutic agent of claim 21, wherein at least one group represented by Z is heterocyclic group optionally substituted by 1 to 5 substituent(s) selected from the group D wherein said heterocyclic group is selected from the following groups:

wherein each symbol is as defined in claim 21.

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- 23. The therapeutic agent of any of claims 1 to 19, wherein at least one group represented by group D is -(CH<sub>2</sub>),-CONR<sup>a27</sup>R<sup>a28</sup> wherein each symbol is as defined in claim 1, and at least one of R<sup>a27</sup> and R<sup>a28</sup> is C<sub>1-6</sub> alkoxy.
- 24. The therapeutic agent of any of claims 1 to 19, wherein at least one group represented by group D is -(CH<sub>2</sub>)<sub>t</sub>-C (=NR<sup>a33</sup>)NH<sub>2</sub> wherein each symbol is as defined in claim 1, and R<sup>a33</sup> is hydroxyl group or C<sub>1-6</sub> alkoxy.
- 25. The therapeutic agent of any of claims 1 to 19, wherein at least one group represented by group D is -(CH<sub>2</sub>)<sub>t</sub>-O-(CH<sub>2</sub>)<sub>p</sub>-COR<sup>a21</sup>, wherein each symbol is as defined in claim 1, and R<sup>a21</sup> is amino.
  - 26. The therapeutic agent of any of claims 1 to 19, wherein at least one group represented by group D is  $-(CH_2)_1-NR^{a29}CO-R^{a24}$  wherein each symbol is as defined in claim 1, and  $R^{a24}$  is amino or  $C_{1-6}$  alkylamino.
  - 27. The therapeutic agent of any of claims 1 to 19, wherein at least one group represented by group D is -(CH<sub>2</sub>)<sub>t</sub>-NR<sup>a22</sup>R<sup>a23</sup> wherein each symbol is as defined in claim 1, and at least one of R<sup>a22</sup> and R<sup>a23</sup> is heterocyclic group optionally substituted by 1 to 5 substituent(s) selected from the group B.

- 28. The therapeutic agent of any of claims 1 to 19, wherein at least one group represented by group D is heterocyclic group having 1 to 4 heteroatom(s) selected from an oxygen atom, a nitrogen atom and a sulfur atom.
- 29. A fused ring compound of the following formula [II]

$$G^{2} - G^{1} - G^{9} - G^{5$$

wherein the moiety

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$$G^{2} \cdot G^{1} \cdot G^{8} \cdot G^{7} \cdot G^{6} \cdot G^{5} \cdot G^{5}$$

is a fused ring selected from

wherein R1, R2, R3 and R4 are each independently,

- (1) hydrogen atom,
- (2) C<sub>1-6</sub> alkanoyl,
- (3) carboxyl,
- (4) cyano,
- (5) nitro,
- (6)  $C_{1-6}$  alkyl optionally substituted by 1 to 3 substituent(s) selected from the following group A, group A; halogen atom, hydroxyl group, carboxyl, amino,  $C_{1-6}$  alkoxy,  $C_{1-6}$  alkoxy,  $C_{1-6}$  alkoxy,  $C_{1-6}$  alkoxy,  $C_{1-6}$  alkoxycarbonyl and  $C_{1-6}$  alkylamino,

(7)

# -COOR<sup>a1</sup>

wherein  $R^{a1}$  is optionally substituted  $C_{1-6}$  alkyl (as defined above),  $C_{6-14}$  aryl  $C_{1-6}$  alkyl optionally substituted by 1 to 5 substituent(s) selected from the following group B or glucuronic acid residue, group B; halogen atom, cyano, nitro,  $C_{1-6}$  alkyl, halogenated  $C_{1-6}$  alkyl,  $C_{1-6}$  alkanoyl,  $-(CH_2)_r-COOR^{b1}$ ,  $-(CH_2)_r-CONR^{b1}R^{b2}$ ,  $-(CH_2)_r-NR^{b1}-COR^{b2}$ ,  $-(CH_2)_r-NHSO_2R^{b1}$ ,  $-(CH_2)_r-OR^{b1}$ ,  $-(CH_2)_r-SO_2R^{b1}$  and  $-(CH_2)_r-SO_2R^{b1}$  and  $-(CH_2)_r-SO_2R^{b1}$  and  $-(CH_2)_r-SO_2R^{b1}$  and  $-(CH_2)_r-SO_2R^{b1}$  and  $-(CH_2)_r-SO_2R^{b1}$  and  $-(CH_2)_r-SO_2R^{b1}$  and  $-(CH_2)_r-SO_2R^{b1}$  and  $-(CH_2)_r-SO_2R^{b1}$  and  $-(CH_2)_r-SO_2R^{b1}$  and  $-(CH_2)_r-SO_2R^{b1}$  and  $-(CH_2)_r-SO_2R^{b1}$  and  $-(CH_2)_r-SO_2R^{b1}$  and  $-(CH_2)_r-SO_2R^{b1}$ 

gen atom or  $C_{1-6}$  alkyl and r is 0 or an integer of 1 to 6, (8)

wherein  $R^{a2}$  and  $R^{a3}$  are each independently hydrogen atom,  $C_{1-6}$  alkoxy or optionally substituted  $C_{1-6}$  alkyl (as defined above),

(9)

wherein Ra4 is hydrogen atom or hydroxyl group,

(10)

20 wherein R<sup>a5</sup> is hydrogen atom, C<sub>1-6</sub> alkanoyl or C<sub>1-6</sub> alkylsulfonyl, (11)

-OR<sup>a6</sup>

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wherein  $R^{a6}$  is hydrogen atom or optionally substituted  $C_{1-6}$  alkyl (as defined above), (12)

-SO<sub>2</sub>R<sup>a7</sup>

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wherein  $R^{a7}$  is hydroxyl group, amino,  $C_{1-6}$  alkyl or  $C_{1-6}$  alkylamino, (13)

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wherein  $R^{a31}$  is hydrogen atom, optionally substituted  $C_{1-6}$  alkyl (as defined above) or  $C_{6-14}$  aryl  $C_{1-6}$  alkyl optionally substituted by 1 to 5 substituent(s) selected from the above group B,

or

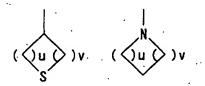
(14) heterocyclic group having 1 to 4 heteroatom(s) selected from an oxygen atom, a nitrogen atom and a sulfur atom, and

R7 is hydrogen atom or optionally substitute C<sub>1-6</sub> alkyl (as defined above),

45 ring Cy' is

(1)  $C_{3-8}$  cycloalkyl optionally substituted by 1 to 5 substituent(s) selected from the following group C, group C; hydroxyl group, halogen atom,  $C_{1-6}$  alkyl and  $C_{1-6}$  alkoxy, or (2)

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wherein u and v are each independently an integer of 1 to 3,

	ring A'	is a group selected from a group consisting of phenyl, pyridyl, pyrazinyl, pyrimidinyl, pyridazinyl, cyclohexenyl, furyl and thienyl,
5	R <sup>5</sup> ' and R <sup>6</sup> '	are each independently
10		<ul> <li>(1) hydrogen atom,</li> <li>(2) halogen atom,</li> <li>(3) optionally substituted C<sub>1-6</sub> alkyl (as defined above) or</li> <li>(4) hydroxyl group</li> </ul>
	ring B	is
15		<ul> <li>(1) C<sub>6-14</sub> aryl,</li> <li>(2) C<sub>3-8</sub> cycloalkyl or</li> <li>(3) heterocyclic group having 1 to 4 heteroatom(s) selected from an oxygen atom, a nitrogen atom and a sulfur atom,</li> </ul>
20	each Z	is independently
		<ul> <li>(1) a group selected from the following group D,</li> <li>(2) C<sub>6-14</sub> aryl optionally substituted by 1 to 5 substituent(s) selected from the following group D,</li> <li>(3) C<sub>3-8</sub> cycloalkyl optionally substituted by 1 to 5 substituent(s) selected from the following group D,</li> </ul>
25		(4) $C_{6-14}$ aryl $C_{1-6}$ alkyl optionally substituted by 1 to 5 substituent(s) selected from the following group D,
30		(5) heterocyclic group optionally substituted by 1 to 5 substituent(s) selected from the following group D wherein the heterocyclic group has 1 to 4 heteroatom(s) selected from an oxygen atom, a nitrogen atom and a sulfur atom, or
		(6) heterocycle C <sub>1-6</sub> alkyl optionally substituted by 1 to 5 substituent(s) selected from the following group D wherein the heterocycle C <sub>1-6</sub> alkyl is C <sub>1-6</sub> alkyl substituted by heterocyclic group optionally substituted by 1 to 5 substituent(s) selected from the group D, as defined above,
35		group D:
40		<ul><li>(a) hydrogen atom,</li><li>(b) halogen atom,</li><li>(c) cyano,</li><li>(d) nitro,</li></ul>
40		(e) optionally substituted $C_{1-6}$ alkyl (as defined above), (f)
45		-(CH <sub>2</sub> ) <sub>t</sub> -COR <sup>a18</sup> ,
		(hereinafter each t means independently 0 or an integer of 1 to 6), wherein R <sup>a18</sup> is
50		<ul> <li>(1') optionally substituted C<sub>1-6</sub> alkyl (as defined above),</li> <li>(2') C<sub>6-14</sub> aryl optionally substituted by 1 to 5 substituent(s) selected from the above group B or</li> </ul>
		(3') heterocyclic group optionally substituted by 1 to 5 substituent(s) selected from the above group B wherein the heterocyclic group has 1 to 4 heteroatom(s) selected from an oxygen atom,
55		a illuogen atom and a sulfur atom,
		(g)

# -(CH<sub>2</sub>)<sub>t</sub>-COOR<sup>a19</sup>

wherein  $R^{a19}$  is hydrogen atom, optionally substituted  $C_{1-6}$  alkyl (as defined above) or  $C_{6-14}$  aryl  $C_{1-6}$  alkyl optionally substituted by 1 to 5 substituent(s) selected from the above group B,

(h)

wherein Ra27 and Ra28 are each independently.

- (1') hydrogen atom,
- (2') optionally substituted C<sub>1-6</sub> alkyl (as defined above),
- (3')  $C_{6-14}$  aryl optionally substituted by 1 to 5 substituent(s) selected from the above group B,
- (4')  $C_{6-14}$  aryl  $C_{1-6}$  alkyl optionally substituted by 1 to 5 substituent(s) selected from the above group B,
- (5') heterocyclic group optionally substituted by 1 to 5 substituent(s) selected from the above group B.
- (6') heterocycle C<sub>1-6</sub> alkyl optionally substituted by 1 to 5 substituent(s) selected from the above group B,

wherein the heterocycle  $C_{1-6}$  alkyl is  $C_{1-6}$  alkyl substituted by heterocyclic group optionally substituted by 1 to 5 substituent(s) selected from the above group B, as defined above.

- (7')  $C_{3-8}$  cycloalkyl optionally substituted by 1 to 5 substituent(s) selected from the above group B,
- (8')  $C_{3-8}$  cycloalkyl  $C_{1-6}$  alkyl optionally substituted by 1 to 5 substituent(s) selected from the above group B,
- (9') hydroxyl group or
- (10') C<sub>1-6</sub> alkoxy,

(i)

wherein  $R^{a33}$  is hydrogen atom,  $C_{1-6}$  alkyl, hydroxyl group or  $C_{1-6}$  alkoxy, (j)

wherein Ra20 is

- (1') hydrogen atom,
- (2') optionally substituted C<sub>1-6</sub> alkyl (as defined above),
- (3') optionally substituted C2-6 alkenyl (as defined above),
- (4') C<sub>2-6</sub> alkynyl optionally substituted by 1 to 3 substituent(s) selected from the above group A,
- (5')  $C_{6-14}$  aryl optionally substituted by 1 to 5 substituent(s) selected from the above group B,
- (6')  $C_{6-14}$  aryl  $C_{1-6}$  alkyl optionally substituted by 1 to 5 substituent(s) selected from the above group B,
- (7') heterocyclic group optionally substituted by 1 to 5 substituent(s) selected from the above group B,
- (8') heterocycle C<sub>1-6</sub> alkyl optionally substituted by 1 to 5 substituent(s) selected from

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the above group B,

- (9')  $\mathrm{C_{3-8}}$  cycloalkyl optionally substituted by 1 to 5 substituent(s) selected from the above group B, or
- (10')  $C_{3-8}$  cycloalkyl  $C_{1-6}$  alkyl optionally substituted by 1 to 5 substituent(s) selected from the above group B,

(k)

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 $-(CH_2)_t$ -O- $(CH_2)_p$ -COR $^{a21}$ 

wherein  $R^{a21}$  is amino,  $C_{1-6}$  alkylamino or heterocyclic group optionally substituted by 1 to 5 substituent(s) selected from the above group B, and p is 0 or an integer of 1 to 6,

(1)

-(CH<sub>2</sub>)<sub>t</sub>-NR<sup>a22</sup>R<sup>a23</sup>

wherein Ra22 and Ra23 are each independently

- (1') hydrogen atom,
- (2') optionally substituted C<sub>1-6</sub> alkyl (as defined above),
- (3')  $C_{6-14}$  aryl optionally substituted by 1 to 5 substituent(s) selected from the above group B,
- (4')  $C_{6-14}$  aryl  $C_{1-6}$  alkyl optionally substituted by 1 to 5 substituent(s) selected from the above group B,
- (5') heterocycle  $\mathrm{C}_{1-6}$  alkyl optionally substituted by 1 to 5 substituent(s) selected from the above group B or
- (6') heterocyclic group optionally substituted by 1 to 5 substituent(s) selected from the above group B,

(m)

 $-(CH_2)_t$ -NR<sup>a29</sup>CO-R<sup>a24</sup>

wherein  $R^{a29}$  is hydrogen atom,  $C_{1-6}$  alkyl or  $C_{1-6}$  alkanoyl, and  $R^{a24}$  is

- (1') amino.
- (2') C<sub>1-6</sub> alkylamino,
- (3') optionally substituted  $C_{1-6}$  alkyl (as defined above),
- (4')  $C_{6-14}$  aryl optionally substituted by 1 to 5 substituent(s) selected from the above group B,
- (5') heterocyclic group optionally substituted by 1 to 5 substituent(s) selected from the above group B, or
- (6') heterocycle  $C_{1-6}$  alkyl optionally substituted by 1 to 5 substituent(s) selected from the above group B,

(n)

-(CH<sub>2</sub>)<sub>t</sub>-NR<sup>a29</sup>SO<sub>2</sub>-R<sup>a25</sup>

wherein  $R^{a29}$  is as defined above, and  $R^{a25}$  is hydrogen atom, optionally substituted  $C_{1-6}$  alkyl (as defined above),  $C_{6-14}$  aryl optionally substituted by 1 to 5 substituent(s) selected from the above group B

or heterocyclic group optionally substituted by 1 to 5 substituent(s) selected from the above

		group B, (o)
5		-(CH <sub>2</sub> ) <sub>t</sub> -S(O) <sub>q</sub> -R <sup>a25</sup>
10		wherein $R^{a25}$ is as defined above, and q is 0, 1 or 2, (p)
		-(CH <sub>2</sub> ) <sub>t</sub> -SO <sub>2</sub> -NHR <sup>a26</sup>
15		wherein $R^{a26}$ is hydrogen atom, optionally substituted $C_{1-6}$ alkyl (as defined above), $C_{6-1}$ aryl optionally substituted by 1 to 5 substituent(s) selected from the above group B or heterocyclic group optionally substituted by 1 to 5 substituent(s) selected from the above group B,
20		and .
20		<ul> <li>(q) heterocyclic group having 1 to 4 heteroatom(s) selected from an oxygen atom, a nitrogen atom and a sulfur atom,</li> </ul>
25	w Y	is an integer of 1 to 3, and is
30		<ul> <li>(1) a single bond,</li> <li>(2) C<sub>1-6</sub> alkylene,</li> <li>(3) C<sub>2-6</sub> alkenylene,</li> <li>(4)</li> </ul>
		-(CH <sub>2</sub> ) <sub>m</sub> -O-(CH <sub>2</sub> ) <sub>n</sub> -,
35		(hereinafter m and n are each independently 0 or an integer of 1 to 6), (5)
40		-CO-,
		(6)
45		-CO <sub>2</sub> -(CH <sub>2</sub> ) <sub>n</sub> -,
		(7)
		-CONH- (CH <sub>2</sub> ) <sub>n</sub> -NH-,
50	-	(8)
		-NHCO <sub>2</sub> -,
55		(9)

	-NHCONH-,
5	(10)
	-O-(CH <sub>2</sub> ) <sub>n</sub> -CO-,
10	(11)
	-O-(CH <sub>2</sub> ) <sub>n</sub> -O-,
15	(12)
	-SO <sub>2</sub> -,
20	(13)
	$-(CH_2)_m$ -NR <sup>a12</sup> - $(CH_2)_n$ -
25	wherein R <sup>a12</sup> is
30	<ul> <li>(1') hydrogen atom,</li> <li>(2') optionally substituted C<sub>1-6</sub> alkyl (as defined above),</li> <li>(3') C<sub>6-14</sub> aryl C<sub>1-6</sub> alkyl optionally substituted by 1 to 5 substituent(s) selected from the above group B,</li> <li>(4') C<sub>6-14</sub> aryl optionally substituted by 1 to 5 substituent(s) selected from the above group B,</li> <li>(5')</li> </ul>
35	-COR <sup>b5</sup>
40	wherein $R^{b5}$ is hydrogen atom, optionally substituted $C_{1-6}$ alkyl (as defined above), $C_{6-14}$ aryl optionally substituted by 1 to 5 substituent(s) selected from the above group B or $C_{6-14}$ aryl $C_{1-6}$ alkyl optionally substituted by 1 to 5 substituent(s) selected from the above group B, (6')
45	-COOR <sup>b5</sup>
	(R <sup>b5</sup> is as defined above) or (7')
50	-SO <sub>2</sub> R <sup>b5</sup>
	(Rb5 is as defined above),
55	(14)
	-NR <sup>a12</sup> CO-

(Ra12 is as defined above), (15)-CONR<sup>a13</sup>- (CH<sub>2</sub>)<sub>n</sub>-5 wherein  $R^{a13}$  is hydrogen atom, optionally substituted  $C_{1-6}$  alkyl (as defined above) or  $C_{6-14}$ aryl C<sub>1-6</sub> alkyl optionally substituted by 1 to 5 substituent(s) selected from the above group B, 10 -CONH-CHR<sup>a14</sup>wherein  $R^{a14}$  is  $C_{6-14}$  aryl optionally substituted by 1 to 5 substituent(s) selected from the above 15 group B, (17) $-O-(CH_2)_m-CR^{a15}R^{a16}-(CH_2)_n-$ 20 wherein Ra15 and Ra16 are each independently (1') hydrogen atom, (2') carboxyl, 25 (3') C<sub>1-6</sub> alkyl, (4') -ORb6 30 wherein  $R^{b6}$  is  $C_{1-6}$  alkyl or  $C_{6-14}$  aryl  $C_{1-6}$  alkyl, (5') 35 -NHR<sup>b7</sup> wherein  $R^{b7}$  is hydrogen atom,  $C_{1-6}$  alkyl,  $C_{1-6}$  alkanoyl or  $C_{6-14}$  aryl  $C_{1-6}$  alkyloxycarbonyl, or Ra15 is optionally (6')40 45 wherein n', ring B', Z' and w' are the same as the above-mentioned n, ring B, Z and w, respec-

tively, and may be the same as or different from the respective counterparts, (18)

( $R^{a12}$  and  $R^{a15}$  are each as defined above), (19)

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wherein  $R^{a17}$  is hydrogen atom or  $C_{1-6}$  alkyl, (20)

(e is 0, 1 or 2,  $R^{a15}$  and  $R^{a16}$  are each as defined above), or

(21) -(CH<sub>2</sub>)<sub>m</sub>-CR<sup>a15</sup>Ra<sup>16</sup>-(CH<sub>2</sub>)<sub>n</sub>-(Ra<sup>15</sup> and Ra<sup>16</sup> are each as defined above),

or a pharmaceutically acceptable salt thereof.

30. The fused ring compound of claim 29, which is represented by the following formula [II-1]

 $R^2$   $R^3$   $R^4$   $R^7$   $R^5$   $R^5$   $R^5$   $R^5$   $R^5$   $R^5$   $R^5$   $R^5$   $R^5$ 

wherein each symbol is as defined in claim 29, or a pharmaceutically acceptable salt thereof.

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31. The fused ring compound of claim 29, which is represented by the following formula [II-2]

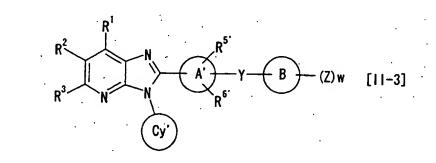
$$\begin{array}{c|c}
R^2 & R^1 \\
\hline
 R^3 & R^4 & Cy'
\end{array}$$

$$\begin{array}{c|c}
R^{5'} & B \\
\hline
 R^6 & Cy
\end{array}$$

$$\begin{array}{c|c}
R^{5'} & B \\
\hline
 R^6 & Cy
\end{array}$$

wherein each symbol is as defined in claim 29, or a pharmaceutically acceptable salt thereof.

32. The fused ring compound of claim 29, which is represented by the following formula [II-3]



wherein each symbol is as defined in claim 29, or a pharmaceutically acceptable salt thereof.

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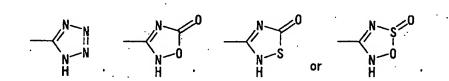
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33. The fused ring compound of claim 29, which is represented by the following formula [II-4]

$$R^{2}$$
 $R^{3}$ 
 $N$ 
 $R^{6}$ 
 wherein each symbol is as defined in claim 29, or a pharmaceutically acceptable salt thereof.

34. The fused ring compound of any of claims 29 to 33, wherein at least one of R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup> and R<sup>4</sup> is carboxyl, -COOR<sup>a1</sup>, -CONR<sup>a2</sup>R<sup>a3</sup>, -SO<sub>2</sub>R<sup>a7</sup> (wherein R<sup>a1</sup>, R<sup>a2</sup>, R<sup>a3</sup> and R<sup>a7</sup> are as defined in claim 29),



or a pharmaceutically acceptable salt thereof.

- 35. The fused ring compound of claim 34, wherein at least one of R1, R2, R3 and R4 is carboxyl, -COORa1 or -SO<sub>2</sub>Ra7 wherein Ra1 and Ra7 are as defined in claim 29, or a pharmaceutically acceptable salt thereof.
- **36.** The fused ring compound of claim 35, wherein at least one of R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup> and R<sup>4</sup> is carboxyl or -COOR<sup>a1</sup> wherein R<sup>a1</sup> is as defined in claim 29, or a pharmaceutically acceptable salt thereof.
- 40 37. The fused ring compound of claim 36, wherein R<sup>2</sup> is carboxyl and R<sup>1</sup>, R<sup>3</sup> and R<sup>4</sup> are hydrogen atoms, or a pharmaceutically acceptable salt thereof.
  - 38. The fused ring compound of any of claims 29 to 33, wherein at least one of R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup> and R<sup>4</sup> is -COOR<sup>a1</sup> wherein R<sup>a1</sup> is glucuronic acid residue, or a pharmaceutically acceptable salt thereof.
  - **39.** The fused ring compound of any of claims 29 to 33, wherein at least one of R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup> and R<sup>4</sup> is heterocyclic group having 1 to 4 heteroatom(s) selected from an oxygen atom, a nitrogen atom and a sulfur atom, or a pharmaceutically acceptable salt thereof.
  - 40. The fused ring compound of any of claims 29 to 39, wherein the ring Cy' is cyclopentyl, cyclohexyl, cycloheptyl or tetrahydrothiopyranyl, or a pharmaceutically acceptable salt thereof.
    - 41. The fused ring compound of claim 40, wherein the ring Cy' is cyclopentyl, cyclohexyl or cycloheptyl, or a pharmaceutically acceptable salt thereof.
    - 42. The fused ring compound of any of claims 29 to 39, wherein the ring Cy' is

wherein each symbol is as defined in claim 29, or a pharmaceutically acceptable salt thereof.

**43**. The fused ring compound of any of claims 29 to 42, wherein the ring A' is phenyl, pyridyl, pyrazinyl, pyrimidinyl or pyridazinyl, or a pharmaceutically acceptable salt thereof.

44. The fused ring compound of claim 43, wherein the ring A' is phenyl or pyridyl, or a pharmaceutically acceptable salt thereof.

45. The fused ring compound of claim 44, wherein the ring A' is phenyl, or a pharmaceutically acceptable salt thereof.

**46.** The fused ring compound of any of claims 29 to 45, wherein at least one substituent optionaly substituted by group A is a substituent substituted by C<sub>1-6</sub> alkoxy, or a pharmaceutically acceptable salt thereof.

47. The fused ring compound of any of claims 29 to 46, wherein the Y is  $-(CH_2)_m$ -O- $(CH_2)_n$ -, -NHCO<sub>2</sub>-, -CONH-CHRa<sup>14</sup>-, -  $(CH_2)_m$ -NRa<sup>12</sup>-  $(CH_2)_n$ -, -CONRa<sup>13</sup>- $(CH_2)_n$ -, -O- $(CH_2)_m$ -CRa<sup>15</sup>Ra<sup>16</sup>- $(CH_2)_n$ - or - $(CH_2)_n$ -NRa<sup>12</sup>-CHRa<sup>15</sup>- (wherein each symbol is as defined in claim 29), or a pharmaceutically acceptable salt thereof.

**48.** The fused ring compound of claim 47, wherein the Y is -  $(CH_2)_m$ -O- $(CH_2)_n$ - or -O- $(CH_2)_m$ -CRa15Ra16- $(CH_2)_n$ - (wherein each symbol is as defined in claim 29), or a pharmaceutically acceptable salt thereof.

49. The fused ring compound of claim 48, wherein the Y is - (CH<sub>2</sub>)<sub>m</sub>-O-(CH<sub>2</sub>)<sub>n</sub>- wherein each symbol is as defined in claim 29, or a pharmaceutically acceptable salt thereof.

**50**. The fused ring compound of any of claims 29 to 46, wherein the Y is  $-(CH_2)_m$ - $CR^{a15}R^{a16}$ - $(CH_2)_n$ - (wherein each symbol is as defined in claim 29), or a pharmaceutically acceptable salt thereof.

**51.** The fused ring compound of any of claims 29 to 50, wherein the R<sup>2</sup> is carboxyl, R<sup>1</sup>, R<sup>3</sup> and R<sup>4</sup> are hydrogen atoms, the ring Cy' is cyclopentyl, cyclohexyl or cycloheptyl, and the ring A' is phenyl, or a pharmaceutically acceptable salt thereof.

52. The fused ring compound of any of claims 29 to 51, wherein at least one group represented by Z is heterocycle C<sub>1-6</sub> alkyl optionally substituted by 1 to 5 substituent(s) selected from the group D, or a pharmaceutically acceptable salt thereof.

53. The fused ring compound of any of claims 29 to 51, wherein at least one group represented by Z is heterocyclic group optionally substituted by 1 to 5 substituent(s) selected from the group D, wherein said heterocyclic group is selected from the following groups:

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wherein  $E^1$  is an oxygen atom, a sulfur atom or N(-R<sup>a35</sup>),  $E^2$  is an oxygen atom,  $CH_2$  or N(-R<sup>a35</sup>),  $E^3$  is an oxygen atom or a sulfur atom, wherein each R<sup>a35</sup> is independently hydrogen atom or  $C_{1-6}$  alkyl, f is an integer of 1 to 3, and hand h' are the same or different and each is an integer of 1 to 3, or a pharmaceutically acceptable salt thereof.

**54.** The fused ring compound of claim 53, wherein at least one group represented by Z is heterocyclic group optionally substituted by 1 to 5 substituent(s) selected from the group D, wherein said heterocyclic group is selected from the following: groups:

$$-N = \begin{pmatrix} 0 & 0 & 0 \\ 0 & S = 2 \\ -N & S = 2 \end{pmatrix}$$
and
$$-N = \begin{pmatrix} 0 & 0 & 0 \\ 0 & S = 2 \\ -N & S = 2 \end{pmatrix}$$

wherein each symbol is as defined in claim 53, or a pharmaceutically acceptable salt thereof.

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- 55. The fused ring compound of claim any of claims 29 to 51, wherein at least one group represented by group D is -(CH<sub>2</sub>)<sub>1</sub>-CONR<sup>a27</sup>R<sup>a28</sup> wherein each symbol is as defined in claim 29, and at least one of R<sup>a27</sup> and R<sup>a28</sup> is C<sub>1-6</sub> alkoxy, or a pharmaceutically acceptable salt thereof.
  - 56. The fused ring compound of any of claims 29 to 51, wherein at least one group represented by group D is -(CH<sub>2</sub>)<sub>t</sub>-C (=NR<sup>a33</sup>)NH<sub>2</sub> wherein each symbol is as defined in claim 29, and R<sup>a33</sup> is hydroxyl group or C<sub>1-6</sub> alkoxy, or a pharmaceutically acceptable salt thereof.
  - 57. The fused ring compound of any of claims 29 to 51, wherein at least one group represented by group D is -(CH<sub>2</sub>)<sub>1</sub>-O-(CH<sub>2</sub>)<sub>p</sub>-COR<sup>a21</sup> wherein each symbol is as defined in claim 29, and R<sup>a21</sup> is amino, or a pharmaceutically acceptable salt thereof.
  - 58. The fused ring compound of any of claims 29 to 51, wherein at least one group represented by group D is -(CH<sub>2</sub>)<sub>t</sub>-NR<sup>a29</sup>CO-R<sup>a24</sup> wherein each symbol is as defined in claim 29, and R<sup>a24</sup> is amino or C<sub>1-6</sub> alkylamino, or a pharmaceutically acceptable salt thereof.
  - 59. The fused ring compound of any of claims 29 to 51, wherein at least one group represented by group D is -(CH<sub>2</sub>)<sub>t</sub>-NR<sup>a22</sup>R<sup>a23</sup> wherein each symbol is as defined in claim 29, and at least one of R<sup>a22</sup> and R<sup>a23</sup> is heterocyclic group optionally substituted by 1 to 5 substituent(s) selected from the group B, or a pharmaceutically acceptable salt thereof.
  - **60.** The fused ring compound of any of claims 29 to 51, wherein at least one group represented by group D is heterocyclic group having 1 to 4 heteroatom(s) selected from an oxygen atom, a nitrogen atom and a sulfur atom, or a pharmaceutically acceptable salt thereof.
  - **61.** The fused ring compound of claim 29 or a pharmaceutically acceptable salt thereof, which is selected from the group consisting of

ethyl 2-[4-(3-bromophenoxy)phenyl]-1-cyclohexylbenzimidazole-5-carboxylate,

2-[4-(3-bromophenoxy)phenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid,

ethyl 2-[4-(2-bromo-5-chlorobenzyloxy)phenyl]-1-cyclohexylbenzimidazole-5-carboxylate,

ethyl 2-{4-[2-(4-chlorophenyl)-5-chlorobenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylate,

2-{4-[2-(4-chlorophenyl)-5-chlorobenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,

ethyl 2-[4-(2-bromo-5-methoxybenzyloxy)phenyl]-1-cyclohexylbenzimidazole-5-carboxylate,

ethyl 2-{4-[2-(4-chlorophenyl)-5-methoxybenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylate,

2-{4-[2-(4-chlorophenyl)-5-methoxybenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,

ethyl 1-cyclohexyl-2-{4-[(E)-2-phenylvinyl]phenyl}benzimidazole-5-carboxylate,

1-cyclohexyl-2-{4-[(E)-2-phenylvinyl]phenyl}benzimidazole-5-carboxylic acid,

2-(4-benzyloxyphenyl)-1-cyclopentylbenzimidazole-5-carboxylic acid,

2-(4-benzyloxyphenyl)-1-cyclopentylbenzimidazole-5-carboxamide,

2-(4-benzyloxyphenyl)-5-cyano-1-cyclopentylbenzimidazole,

2-(4-benzyloxyphenyl)-1-cyclopentylbenzimidazole-5-carboxamide oxime,

ethyl 1-cyclohexyl-2-{4-[{4-(4-fluorophenyl)-2-methyl-5-thiazolyl}methoxy]phenyl}benzimidazole-5-carboxylate,

1-cyclohexyl-2-{4-[{4-(4-fluorophenyl)-2-methyl-5-thiazolyl}methoxy]phenyl}benzimidazole-5-carboxylic acid,

ethyl 2-{4-[bis(3-fluorophenyl)methoxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylate,

2-{4-[bis(3-fluorophenyl)methoxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,

ethyl 2-(4-benzoylaminophenyl)-1-cyclopentylbenzimidazole-5-carboxylate,

2-(4-benzoylaminophenyl)-1-cyclopentylbenzimidazole-5-carboxylic acid,

ethyl 2-{4-[3-(3-chlorophenyl)phenoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylate,

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2-{4-[3-(3-chlorophenyl)phenoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
          ethyl 2-[4-(3-acetoxyphenyloxy)phenyl]-1-cyclohexylbenzimidazole-5-carboxylate,
          ethyl 1-cyclohexyl-2-[4-(3-hydroxyphenyloxy)phenyl]benzimidazole-5-carboxylate,
          ethyl 1-cyclohexyl-2-{4-[3-(4-pyridylmethoxy)phenyloxy]phenyl}benzimidazole-5-carboxylate,
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          1-cyclohexyl-2-{4-[3-(4-pyridylmethoxy)phenyloxy]phenyl}benzimidazole-5-carboxylic acid,
          2-(4-benzyloxyphenyl)-1-cyclopentylbenzimidazole,
          ethyl 2-(4-benzyloxyphenyl)-1-cyclopentylbenzimidazole-5-carboxylate,
          2-(4-benzyloxyphenyl)-1-cyclopentyl-N,N-dimethylbenzimidazole-5-carboxamide,
          2-(4-benzyloxyphenyl)-1-cyclopentyl-N-methoxy-N-methylbenzimidazole-5-carboxamide,
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          2-(4-benzyloxyphenyl)-1-cyclopentyl-5-(1-hydroxy-1-methylethyl)benzimidazole,
          5-acetyl-2-(4-benzyloxyphenyl)-1-cyclopentylbenzimidazole;
          2-(4-benzyloxyphenyl)-1-cyclopentyl-N-(2-dimethylaminoethyl)benzimidazole-5-carboxamide dihydrochloride,
          2-(4-benzyloxyphenyl)-1-cyclopentyl-5-nitrobenzimidazole5-amino-2-(4-benzyloxyphenyl)-1-cyclopentylbenzimi-
          dazole hydrochloride,
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          5-acetylamino-2-(4-benzyloxyphenyl)-1-cyclopentylbenzimidazole,
          2-(4-benzyloxyphenyl)-1-cyclopentyl-5-methanesulfonylaminobenzimidazole,
          5-sulfamoyl-2-(4-benzyloxyphenyl)-1-cyclopentylbenzimidazole,
          2-[4-(4-tert-butylbenzyloxy)phenyl]-1-cyclopentylbenzimidazole-5-carboxylic acid,
          2-[4-(4-carboxybenzyloxy)phenyl]-1-cyclopentylbenzimidazole-5-carboxylic acid,
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          2-[4-(4-chlorobenzyloxy)phenyl]-1-cyclopentylbenzimidazole-5-carboxylic acid,
          2-{4-{(2-chloro-5-thienyl)methoxy]phenyl}-1-cyclopentylbenzimidazole-5-carboxylic acid,
          1-cyclopentyl-2-[4-(4-trifluoromethylbenzyloxy)phenyl]benzimidazole-5-carboxylic acid,
          1-cyclopentyl-2-[4-(4-methoxybenzyloxy)phenyl]benzimidazole-5-carboxylic acid,
          1-cyclopentyl-2-[4-(4-pyridylmethoxy)phenyl]benzimidazole-5-carboxylic acid hydrochloride,
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          1-cyclopentyl-2-[4-(4-methylbenzyloxy)phenyl]benzimidazole-5-carboxylic acid.
          1-cyclopentyl-2-(4-[(3.5-dimethyl-4-isoxazolyl)methoxylphenyl}benzimidazole-5-carboxylic acid.
          [2-(4-benzyloxyphenyl)-1-cyclopentylbenzimidazol-5-yl]carbonylaminoacetic acid,
          2-[4-(2-chlorobenzyloxy)phenyl]-1-cyclopentylbenzimidazole-5-carboxylic acid,
          2-[4-(3-chlorobenzyloxy)phenyl]-1-cyclopentylbenzimidazole-5-carboxylic acid,
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          2-(4-benzyloxyphenyl)-3-cyclopentylbenzimidazole-5-carboxylic acid,
          2-[4-(benzenesulfonylamino)phenyl]-1-cyclopentylbenzimidazole-5-carboxylic acid,
          1-cyclopentyl-2-[4-(3,5-dichlorophenylcarbonylamino)phenyl]benzimidazole-5-carboxylic acid,
          2-{4-[(4-chlorophenyl)carbonylamino]phenyl}-1-cyclopentylbenzimidazole-5-carboxylic acid,
          2-{4-[(4-tert-butylphenyl)carbonylamino]phenyl}-1-cyclopentylbenzimidazole-5-carboxylic acid,
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          2-{4-[(4-benzyloxyphenyl)carbonylamino]phenyl}-1-cyclopentylbenzimidazole-5-carboxylic acid,
          trans-4-[2-(4-benzyloxyphenyl)-5-carboxybenzimidazol-1-yl]cyclohexan-1-ol,
          trans-1-[2-(4-benzyloxyphenyl)-5-carboxybenzimidazol-1-yl]-4-methoxycyclohexane,
          2-(4-benzyloxyphenyl)-5-carboxymethyl-1-cyclopentylbenzimidazole,
          2-[(4-cyclohexylphenyl)carbonylamino]-1-cyclopentylbenzimidazole-5-carboxylic acid,
          1-cyclopentyl-2-[4-(3,5-dichlorobenzyloxy)phenyl]benzimidazole-5-carboxylic acid,
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          1-cyclopentyl-2-[4-(3,4-dichlorobenzyloxy)phenyl]benzimidazole-5-carboxylic acid,
          1-cyclopentyl-2-[4-(phenylcarbamoylamino)phenyl]benzimidazole-5-carboxylic acid,
          1-cvclopentyl-2-[4-(diphenylmethoxy)phenyl]benzimidazole-5-carboxylic acid.
          1-cyclopentyl-2-(4-phenethyloxyphenyl)benzimidazole-5-carboxylic acid.
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          trans-1-(2-(4-benzyloxyphenyl)-5-carboxybenzimidazol-1-yl]-4-tert-butylcyclohexane.
         2-(4-benzyloxyphenyl)-5-carboxymethoxy-1-cyclopentylbenzimidazole,
         2-(4-benzylaminophenyl)-1-cyclopentylbenzimidazole-5-carboxylic acid,
         2-[4-(N-benzenesulfonyl-N-methylamino)phenyl]-1-cyclopentylbenzimidazole-5-carboxylic acid,
         2-[4-(N-benzyl-N-methylamino)phenyl]-1-cyclopentylbenzimidazole-5-carboxylic acid,
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          1-cyclohexyl-2-(4-phenethylphenyl)benzimidazole-5-carboxylic acid,
          1-cyclohexyl-2-[4-(3,5-dichlorobenzyloxy)phenyl]benzimidazole-5-carboxylic acid,
          1-cyclohexyl-2-[4-(diphenylmethoxy)phenyl]benzimidazole-5-carboxylic acid,
          1-cyclohexyl-2-[4-(3,5-di-tert-butylbenzyloxy)phenyl]-benzimidazole-5-carboxylic acid,
         2-(4-benzyloxyphenyl)-1-(4-methylcyclohexyl)benzimidazole-5-carboxylic acid,
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         1-cyclohexyl-2-{4-[2-(2-naphthyl)ethoxy]phenyl}benzimidazole-5-carboxylic acid,
          1-cyclohexyl-2-[4-(1-naphthyl)methoxyphenyl]benzimidazole-5-carboxylic acid,
          1-cyclohexyl-2-[4-(dibenzylamino)phenyl]benzimidazole-5-carboxylic acid,
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2-[4-(2-biphenylylmethoxy)phenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid,

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2-(4-benzyloxyphenyl)-1-cyclohexylbenzimidazole-5-carboxylic acid,
             1-cyclohexyl-2-[4-(dibenzylmethoxy)phenyl]benzimidazole-5-carboxylic acid,
            2-(4-benzoylmethoxyphenyl)-1-cyclohexylbenzimidazole-5-carboxylic acid,
            1-cyclohexyl-2-[4-(3,3-diphenylpropyloxy)phenyl]benzimidazole-5-carboxylic acid,
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            2-[4-(3-chloro-6-phenylbenzyloxy)phenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid,
            1-cyclohexyl-2-{4-[2-(phenoxy)ethoxy]phenyl}benzimidazole-5-carboxylic acid,
            1-cyclohexyl-2-[4-(3-phenylpropyloxy)phenyl]benzimidazole-5-carboxylic acid,
            1-cyclohexyl-2-[4-(5-phenylpentyloxy)phenyl]benzimidazole-5-carboxylic acid,
            2-(2-benzyloxy-5-pyridyl)-1-cyclohexylbenzimidazole-5-carboxylic acid,
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            1-cyclohexyl-2-{4-[2-(3,4,5-trimethoxyphenyl)ethoxy]phenyl}benzimidazole-5-carboxylic acid,
            2-(4-benzyloxyphenyl)-1-(4,4-dimethylcyclohexyl)benzimidazole-5-carboxylic acid,
            1-cyclohexyl-2-{4-[2-(1-naphthyl)ethoxy]phenyl}benzimidazole-5-carboxylic acid,
            2-[4-(2-benzyloxyphenoxy)phenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid,
            2-[4-(3-benzyloxyphenoxy)phenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid,
            1-cyclohexyl-2-[4-(2-hydroxyphenoxy)phenyl]benzimidazole-5-carboxylic acid,
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            1-cyclohexyl-2-[4-(3-hydroxyphenoxy)phenyl]benzimidazole-5-carboxylic acid,
            1-cyclohexyl-2-[4-(2-methoxyphenoxy)phenyl]benzimidazole-5-carboxylic acid,
            1-cyclohexyl-2-[4-(3-methoxyphenoxy)phenyl]benzimidazole-5-carboxylic acid,
            1-cyclohexyl-2-[4-(2-propoxyphenoxy)phenyl]benzimidazole-5-carboxylic acid,
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            1-cyclohexyl-2-[4-(3-propoxyphenoxy)phenyl]benzimidazole-5-carboxylic acid,
           1-cyclohexyl-2-{4-[2-(3-methyl-2-butenyloxy)phenoxy]phenyl}benzimidazole-5-carboxylic acid,
           1-cyclohexyl-2-{4-[3-(3-methyl-2-butenyloxy)phenoxy]phenyl}benzimidazole-5-carboxylic acid,
           1-cyclohexyl-2-[4-(2-isopentyloxyphenoxy)phenyl]benzimidazole-5-carboxylic acid,
           1-cyclohexyl-2-[4-(3-isopentyloxyphenoxy)phenyl]benzimidazole-5-carboxylic acid,
           1-cyclohexyl-2-{4-[2-(10,11-dihydro-5H-dibenzo[b,f]azepin-5-yl)ethoxy]phenyl}benzimidazole-5-carboxylic acid,
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           1-cyclohexyl-2-{4-[2-(4-trifluoromethylphenyl)benzyloxy]phenyl}benzimidazole-5-carboxylic acid,
           2-{4-[bis(4-chlorophenyl)methoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
           1-cyclohexyl-2-{4-[2-(4-methoxyphenyl)ethoxy]phenyl}benzimidazole-5-carboxylic acid,
           1-cyclohexyl-2-{4-[2-(2-methoxyphenyl)ethoxy]phenyl}benzimidazole-5-carboxylic acid,
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           1-cyclohexyl-2-{4-[2-(3-methoxyphenyl)ethoxy]phenyl}benzimidazole-5-carboxylic acid,
           2-(4-benzyloxyphenyl)-1-cycloheptylbenzimidazole-5-carboxylic acid,
           1-cyclohexyl-2-[4-(2-phenethyloxyphenoxy)phenyl]benzimidazole-5-carboxylic acid,
           1-cyclohexyl-2-[4-(3-phenethyloxyphenoxy)phenyl]benzimidazole-5-carboxylic acid,
           1-cyclohexyl-2-[4-(2,2-diphenylethoxy)phenyl]benzimidazole-5-carboxylic acid,
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           cis-1-[2-(4-benzyloxyphenyl)-5-carboxybenzimidazol-1-yl]-4-fluorocyclohexane,
           1-cyclohexyl-2-[4-(2-phenoxyphenoxy)phenyl]benzimidazole-5-carboxylic acid,
           1-cyclohexyl-2-[4-(3-phenoxyphenoxy)phenyl]benzimidazole-5-carboxylic acid,
           2-{4-[(2R)-2-benzyloxycarbonylamino-2-phenylethoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
           1-cyclohexyl-2-{2-fluoro-4-[2-(4-trifluoromethylphenyl)benzyloxy]phenyl}benzimidazole-5-carboxylic acid,
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           2-[4-(4-benzyloxyphenoxy)phenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid,
          2-{4-[bis(4-methylphenyl)methoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
          2-{4-[bis(4-fluorophenyl)methoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
           1-cyclohexyl-6-methoxy-2-[4-(3-phenylpropoxy)phenyl]benzimidazole-5-carboxylic acid,
           1-cyclohexyl-6-hydroxy-2-[4-(3-phenylpropoxy)phenyl]benzimidazole-5-carboxylic acid,
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          1-cyclohexyl-6-methyl-2-[4-(3-phenylpropoxy)phenyl]benzimidazole-5-carboxylic acid,
          2-{4-[2-(2-benzyloxyphenyl)ethoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
          2-{4-[2-(3-benzyloxyphenyl)ethoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
          2-[4-(2-carboxymethyloxyphenoxy)phenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid,
          2-[4-(3-carboxymethyloxyphenoxy)phenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid,
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          2-{4-[3-chloro-6-(4-methylphenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
          2-{4-[3-chloro-6-(4-methoxyphenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
          1-cyclohexyl-2-{2-methyl-4-[2-(4-trifluoromethylphenyl)benzyloxy]phenyl}benzimidazole-5-carboxylic acid,
          2-{4-[2-(4-tert-butylphenyl)-5-chlorobenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
          2-{4-(3-chloro-6-phenylbenzyloxy)-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
55
          2-{4-[3-chloro-6-(3,5-dichlorophenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
          2-{4-[bis(4-fluorophenyl)methoxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
          2-{4-(4-benzyloxyphenoxy)-2-chlorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
          2-{4-(4-benzyloxyphenoxy)-2-trifluoromethylphenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
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2-{4-[3-chloro-6-(2-trifluoromethylphenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
          2-{4-[(2R)-2-amino-2-phenylethoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid.
          2-[4-(2-biphenylyloxy)phenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid.
          2-[4-(3-biphenylyloxy)phenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid,
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          2-{4-[2-{(1-tert-butoxycarbonyl-4-piperidyl)methoxy}phenoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic
          acid.
          2-{4-[3-{(1-tert-butoxycarbonyl-4-piperidyl)methoxy}phenoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic
          acid,
          2-{4-[3-chloro-6-(3,4,5-trimethoxyphenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
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          2-{4-[2-(2-biphenylyl)ethoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
          2-[4-(2-biphenylylmethoxy)phenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid,
          1-cyclohexyl-2-{4-[2-(4-piperidylmethoxy)phenoxylphenyl}benzimidazole-5-carboxylic acid hydrochloride,
          1-cyclohexyl-2-{4-[3-(4-piperidylmethoxy)phenoxy]phenyl}benzimidazole-5-carboxylic acid hydrochloride,
          2-{4-[(2R)-2-acetylamino-2-phenylethoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
15
          1-cyclohexyl-2-{4-[3-(4-methyl-3-pentenyloxy)phenoxy]phenyl}benzimidazole-5-carboxylic acid,
          1-cyclohexyl-2-{4-[3-(3-methyl-3-butenyloxy)phenoxy]phenyl}benzimidazole-5-carboxylic acid,
          2-{4-[{(2S)-1-benzyl-2-pyrrolidinyl}methoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
          2-{4-[3-chloro-6-(4-methylthiophenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
          2-{4-[3-chloro-6-(4-methanesulfonylphenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
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          2-{4-[3-chloro-6-(2-thienyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
          2-{4-[3-chloro-6-(3-chlorophenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
          2-{4-[3-chloro-6-(3-pyridyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
          2-{4-[3-chloro-6-(4-fluorophenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
          2-[4-(4-benzyloxyphenoxy)-3-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid,
25
          2-[4-(2-bromo-5-chlorobenzyloxy)phenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid,
          2-{4-[3-chloro-6-(4-chlorophenyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
          2-{4-[2-{(1-acetyl-4-piperidyl)methoxy}phenoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
          2-{4-[3-{(1-acetyl-4-piperidyl)methoxy}phenoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
          1-cyclohexyl-2-{4-[3-(2-propynyloxy)phenoxy]phenyl}benzimidazole-5-carboxylic acid,
30
          1-cyclohexyl-2-{4-[3-(3-pyridylmethoxy)phenoxy]phenyl}benzimidazole-5-carboxylic acid,
          2-(4-benzyloxy-2-methoxyphenyl)-1-cyclohexylbenzimidazole-5-carboxylic acid.
          2-[4-(2-bromo-5-methoxybenzyloxy)phenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid,
          2-[4-(carboxydiphenylmethoxy)phenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid,
          2-{4-[2-(4-chlorophenyl)-5-nitrobenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
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          2-{4-[3-acetylamino-6-(4-chlorophenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
          2-{4-[2-(4-carboxyphenyl)-5-chlorobenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
          2-{4-[{(2S)-1-benzyloxycarbonyl-2-pyrrolidinyl}methoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
          2-{2-chloro-4-[2-(4-trifluoromethylphenyl)benzyloxy]phenyl}-1cyclohexylbenzimidazole-5-carboxylic acid,
          1-cyclohexyl-2-{4-[3-(2-pyridylmethoxy)phenoxy]phenyl}benzimidazole-5-carboxylic acid,
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          2-{4-[2-(4-chlorophenyl)-5-fluorobenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
          2-{4-[3-carboxy-6-(4-chlorophenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
          2-{4-[3-carbamoyl-6-(4-chlorophenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
          1-cyclohexyl-2-{4-[2-(dimethylcarbamoylmethoxy)phenoxy]phenyl}benzimidazole-5-carboxylic acid,
          1-cyclohexyl-2-{4-[2-(piperidinocarbonylmethoxy)phenoxy]phenyl}benzimidazole-5-carboxylic acid,
45
          2-{4-[{(2S)-1-benzenesulfonyl-2-pyrrolidinyl}ethoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid.
          2-{4-[{(2S)-1-benzoyl-2-pyrrolidinyl}methoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
          2-{4-[2-(4-carbamoylphenyl)-5-chlorobenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
          1-cyclohexyl-2-{4-[3-(dimethylcarbamoylmethoxy)phenoxy]phenyl}benzimidazole-5-carboxylic acid,
          1-cyclohexyl-2-{4-[3-(piperidinocarbonylmethoxy)phenoxy]phenyl}benzimidazole-5-carboxylic acid,
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          1-cyclohexyl-2-{4-[3-{(1-methanesulfonyl-4-piperidyl)methoxy}phenoxy]phenyl}benzimidazole-5-carboxylic acid,
          1-cyclohexyl-2-{4-[{2-methyl-5-(4-chlorophenyl)-4-oxazolyl}methoxy]phenyl}benzimidazole-5-carboxylic acid,
          2-{4-[3-(3-chlorobenzyloxy)phenoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
         2-{4-[3-(4-chlorobenzyloxy)phenoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
          1-cyclohexyl-2-{4-[3-(4-fluorobenzyloxy)phenoxy]phenyl}benzimidazole-5-carboxylic acid,
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          1-cyclohexyl-2-{4-[{(2S)-1-(4-nitrophenyl)-2-pyrrolidinyl}methoxy]phenyl}benzimidazole-5-carboxylic acid,
          1-cyclohexyl-2-{4-[{(2S)-1-phenyl-2-pyrrolidinyl}methoxy]phenyl}benzimidazole-5-carboxylic acid hydrochloride,
         2-{4-[{(2S)-1-(4-acetylaminophenyl)-2-pyrrolidinyl}methoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic ac-
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id,

2-{4-[{5-(4-chlorophenyl)-2-methyl-4-thiazolyl}methoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid, 2-{4-[bis(3-fluorophenyl)methoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid, 1-cyclohexyl-2-{4-[2-(4-chlorophenyl)-3-nitrobenzyloxy]phenyl}benzimidazole-5-carboxylic acid, 1-cyclohexyl-2-(4-[3-(4-tetrahydropyranyloxy)phenoxy]phenyl}benzimidazole-5-carboxylic acid, 1-cyclohexyl-2-{4-[3-(4-trifluoromethylbenzyloxy)phenoxy]phenyl}benzimidazole-5-carboxylic acid, 5 1-cyclohexyl-2-{4-[3-{(1-methyl-4-piperidyl)methoxy}phenoxy]phenyl}benzimidazole-5-carboxylic acid, 2-{4-[3-(4-tert-butylbenzyloxy)phenoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid, 2-{4-[3-(2-chlorobenzyloxy)phenoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid. 1-cyclohexyl-2-{4-[3-(3-pyridyl)phenoxy]phenyl}benzimidazole-5-carboxylic acid, 10 2-{4-[3-(4-chlorophenyl)phenoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid, 1-cyclohexyl-2-{4-[3-(4-methoxyphenyl)phenoxy]phenyl}benzimidazole-5-carboxylic acid, 1-cyclohexyl-2-{4-[{4-(4-methanesulfonylphenyl)-2-methyl-5-thiazolyl}methoxy]phenyl}benzimidazole-5-carboxy-2-{4-[{4-(4-chlorophenyl)-2-methyl-5-thiazolyl}methoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid, 2-{4-[1-(4-chlorobenzyl)-3-piperidyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid, 15 1-cyclohexyl-2-{4-[3-{(2-methyl-4-thiazolyl)methoxy}phenoxy]phenyl}benzimidazole-5-carboxylic acid, 1-cyclohexyl-2-{4- [3-{(2, 4-dimethyl-5-thiazolyl)methoxy}phenoxy]phenyl}benzimidazole-5-carboxylic acid, 1-cyclohexyl-2-{4-[3-(3,5-dichlorophenyl)phenoxy]phenyl}benzimidazole-5-carboxylic acid, 2-{4-[1-(4-chlorobenzyl)-4-piperidyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid, 20 2-{4-[3-(4-chlorobenzyloxy)piperidino]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid, 2-{4-[4-carbamoyl-2-(4-chlorophenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid, 2-{4-[4-(4-chlorobenzyloxy)piperidino]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid, 2-{4-[3-{(2-chloro-4-pyridyl)methoxy}phenoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid. 2-{4-[{(2S)-1-(4-dimethylcarbamoylphenyl)-2-pyrrolidinyl}methoxy]phenyl}-1-cyclohexylbenzimidazole-5-carbox-25 ylic acid. 2-{4-[2-(4-chlorophenyl)-5-ethoxycarbonylbenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid, 1-cyclohexyl-2-[4-(3-trifluoromethylphenoxy)phenyl]benzimidazole-5-carboxylic acid, 1-cyclohexyl-2-{4-[{4-(4-dimethylcarbamoylphenyl)-2-methyl-5-thiazolyl}methoxy]phenyl}benzimidazole-5-carboxvlic acid. 2-{4-[2-(4-chlorophenyl) -5-dimethylcarbamoylbenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid, 30 2-{4-[{4-(4-chlorophenyl)-2-methyl-5-pyrimidinyl}methoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride, 2-{4-[{2-(4-chlorophenyl)-3-pyridyl}methoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid dihydrochloride, 35  $2-\{4-[\{3-(4-chlorophenyl)-2-pyridyl\}methoxy]phenyl\}-1-cyclohexylbenzimidazole-5-carboxylic acid,\\$ 2-{4-[2-(3-chlorophenyl)-4-methylamino-1,3,5-triazin-6-yloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid trifluoroacetate, 2-{4-[2-(4-chlorophenyl)-4-(5-tetrazolyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid, 2-[4-(4-benzyloxy-6-pyrimidinyloxy)phenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid, 40 1-cyclohexyl-2-{4-[4-(4-pyridylmethoxy)-6-pyrimidinyloxy]phenyl}benzimidazole-5-carboxylic acid, 2-{4-[4-(3-chlorophenyl)-6-pyrimidinyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid, methyl 2-{4-[2-(4-chlorophenyl)-5-methoxybenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylate, 2-{4-[2-(4-chlorophenyl)-5-methoxybenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride. 45 ethyl 2-{4-[3-(4-chlorophenyl)pyridin-2-ylmethoxy]phenyl}-1-cyclbhexylbenzimidazole-5-carboxylate, methyl 2-[4-(2-bromo-5-tert-butoxycarbonylbenzyloxy)phenyl]-1-cyclohexylbenzimidazole-5-carboxylate, methyl 2-{4-[5-tert-butoxycarbonyl-2-(4-chlorophenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylate, methyl 2-{4-[5-carboxy-2-(4-chlorophenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylate hydro-50 chloride. methyl 2-{4-[2-(4-chlorophenyl)-5-methylcarbamoylbenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylate, 2-{4-[2-(4-chlorophenyl)-5-methylcarbamoylbenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride 2-{4-[3-(tert-butylsulfamoyl)-6-(4-chlorophenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid, 2-{4-[2-(4-chlorophenyl)-5-sulfamoylbenzyloxy)phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid trifluoroace-2-(4-benzyloxycyclohexyl)-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,

2-[2-(2-biphenylyloxymethyl)-5-thienyl]-1-cyclohexylbenzimidazole-5-carboxylic acid,

2-[2-(2-biphenylyloxymethyl)-5-furyl]-1-cyclohexylbenzimidazole-5-carboxylic acid,

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- 1-cyclohexyl-2-{4-[{4-(4-fluorophenyl)-2-hydroxymethyl-5-thiazolyl}methoxy]phenyl}benzimidazole-5-carboxylic acid,
- 1-cyclohexyl-2-{4-[{4-(4-carboxyphenyl)-2-methyl-5-thiazolyl}methoxy]phenyl}benzimidazole-5-carboxylic acid hydrochloride,
  - 1-cyclohexyl-2-{2-fluoro-4-[4-fluoro-2-(3-fluorobenzoyl)benzyloxy]phenyl}benzimidazole-5-carboxylic acid,
  - 2-{4-[2-(4-chlorophenyl)-5-methoxybenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-sulfonic acid,
  - 2-{4-[2-(4-chlorophenyl)-5-methoxybenzyloxy]phenyl}-3-cyclohexylbenzimidazole-4-carboxylic acid,
  - 1-cyclohexyl-2-{4-[3-dimethylcarbamoyl-5-(4-pyridylmethoxy)phenoxy]phenyl}benzimidazole-5-carboxylic acid
  - 1-cyclohexyl-2-{4-[3-carboxy-5-(4-pyridylmethoxy)phenoxy]phenyl}benzimidazole-5-carboxylic acid dihydrochloride.
  - 2-{4-[2-(4-chlorophenyl)-5-methoxybenzyloxy]phenyl}-1-cyclohexylbenzimidazole-4-carboxylic acid,
  - 2-{4-[3-carbamoyl-6-(4-chlorophenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride
  - 2-{4-[{2-(4-carboxyphenyl)-3-pyridyl}methoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
  - 2-(4-[2-(4-chlorophenyl)-5-methoxybenzyloxy]phenyl}-1-(4-tetrahydrothiopyranyl)benzimidazole-5-carboxylic ac-id
  - 2-{4-[2-(4-chlorophenyl)-5-dimethylcarbamoylbenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride.
  - 1-cyclohexyl-2-{4-[3-dimethylcarbamoyl-6-(4-trifluoromethylphenyl)benzyloxy]phenyl}benzimidazole-5-carboxylic acid hydrochloride,
  - 1-cyclohexyl-2-{4-[3-dimethylcarbamoyl-6-(4-methylthiophenyl)benzyloxy]phenyl}benzimidazole-5-carboxylic acid hydrochloride.
- 2-{4-[2-(4-chlorophenyl)-5-methylcarbamoylbenzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-dimethylcarbamoylbenzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-{4-[3-carbamoyl-6-(4-chlorophenyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid
  - 2-{4-[3-dimethylcarbamoyl-6-(4-methanesulfonylphenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-{4-{3-dimethylcarbamoyl-6-(3-pyridyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid dihydrochloride,
- 35 2-{4-[3-dimethylcarbamoyl-6-(4-dimethylcarbamoylphenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-car-boxylic acid,
  - 2-{4-[2-(4-chlorophenyl)-5-methoxybenzyloxy]-2-fluorophenyl}-1-(4-tetrahydrothiopyranyl)benzimidazole-5-carboxylic acid,
  - 2-{4-[2-(4-chlorophenyl)-5-dimethylsulfamoylbenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride
  - 2-{4-[2-(4-chlorophenyl)-5-methanesulfonylbenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
  - $\hbox{$2-(4-[2-(4-chlorophenyl)-5-methyl sulfamoyl benzyloxy] phenyl}-1-cyclohexyl benzimidazole-5-carboxylic acid,$
  - 2-{4-[2-(4-chlorophenyl)-5-dimethylaminobenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
  - 2-{4-[2-(4-chlorophenyl)-5-methanesulfonylaminobenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid .
  - 2-{4-[2-(4-chlorophenyl)-5-diethylcarbamoylbenzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid, 2-{4-[2-(4-chlorophenyl)-5-isopropylcarbamoylbenzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid.
  - 2-{4-[2-(4-chlorophenyl)-5-piperidinocarbonylbenzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
  - 2-{4-[2-(4-chlorophenyl)-5-(1-pyrrolidinyl)carbonylbenzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
  - 2-{4-[2-(4-chlorophenyl)-5-(2-hydroxyethyl)carbamoylbenzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
- <sup>55</sup> 2-{4-[2-(4-chlorophenyl)-5-(4-hydroxypiperidino)carbonylbenzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
  - 2-{4-[2-(4-chlorophenyl)-5-morpholinocarbonylbenzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxy-lic acid,

- 2-{4-[2-(4-chlorophenyl)-5-thiomorpholinocarbonylbenzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid.
- 2-{4-[3-(carboxymethylcarbamoyl)-6-(4-chlorophenyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid.
- 2-{4-[2-{4-(2-carboxyethyl)phenyl}-5-chlorobenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid, 5 2-{4-[3-chloro-6-(4-hydroxymethylphenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid, 2-{4-[3-chloro-6-(4-methoxymethylphenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid, 2-{4-[2-(3-carboxyphenyl)-5-chlorobenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
  - 2-{4-[2-(4-chlorophenyl)-5-methylthiobenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
- 2-{4-[2-(4-chlorophenyl)-5-methylsulfinylbenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid, 2-{4-[2-(4-chlorophenyl)-5-cyanobenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
  - 2-{4-[bis(2-pyridyl)methoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,

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- 2-{4-[bis(4-dimethylcarbamoylphenyl)methoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
- 2-{4-[bis(2-thienyl)methoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
- 15 methyl 2-{4-[2-(4-chlorophenyl)-5-methoxybenzyloxy]phenyl}-1-cyclohexyl-1H-indole-5-carboxylate, 2-{4-[2-(4-chlorophenyl)-5-methoxybenzyloxy]phenyl}-1-cyclohexyl-1H-indole-5-carboxylic acid, methyl 2-{4-[2-(4-chlorophenyl)-5-(dimethylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylate,
- sodium 2-{4-[2-(4-chlorophenyl)-5-(dimethylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-20 5-carboxylate.
  - 2-{4-[5-carboxy-2-(4-chlorophenyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
  - 2-{4-[2-(4-carboxyphenyl)-5-methoxybenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
  - 2-{4-[2-(4-carbamoylphenyl)-5-(dimethylcarbamoyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid.
- 25 2-{4-[5-amino-2-(4-chlorophenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
  - 2-{4-[5-(4-chlorophenyl)-2-methoxybenzylsulfinyl]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride.
  - 2-{4-[5-(4-chlorophenyl)-2-methoxybenzylsulfonyl]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
- 30 2-{4-[2-(4-chlorophenyl)-5-methoxybenzylthio]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride.
  - 2-{4-[bis(4-carboxyphenyl)methoxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
  - 2-[4-(phenyl-3-pyridylmethoxy)-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid,
  - methyl 2-{4-[2-(4-chlorophenyl)-5-(methylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylate,
    - 2-{4-[5-chloro-2-(4-pyridyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
    - 2-{4-[2-(4-chlorophenyl)-5-(benzylcarbamoyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride.
  - 2-{4-[2-(4-chlorophenyl)-5-(cyclohexylmethylcarbamoyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride.
  - 2-{4-[2-(4-chlorophenyl)-5-(4-pyridylmethylcarbamoyl)-benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid dihydrochloride.
  - 2-{4-[2-(4-chlorophenyl)-5-(N-benzyl-N-methylcarbamoyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride.
- 45 2-{4-[5-dimethylaminocarbonyl-2-(4-pyridyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid dihydrochloride,
  - $2-\{4-[2-(4-chlorophenyl)-5-(4-methylpiperazin-1-ylcarbonyl)benzyloxy] phenyl\}-1-cyclohexylbenzimidazole-5-carbonyl benzyloxy. \\$ boxylic acid dihydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-{N-(3-pyridylmethyl)carbamoyl}benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid dihydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-{N-(2-pyridylmethyl)carbamoyl}benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid dihydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-(cyclohexylcarbamoyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
- 55 2-{4-[2-(4-chlorophenyl)-5-(2-pyridin-4-ylethylcarbamoyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid dihydrochloride,
  - 2-{4-[(4-fluorophenyl){4-(dimethylaminocarbonyl)phenyl}methoxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,

- 2-{4-[(4-fluorophenyl)(4-carboxyphenyl)methoxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid, 2-{4-[2-(4-chlorophenyl)-5-(4-oxopiperidinocarbonyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
- 2-{4-[2-(4-chlorophenyl)-5-hydroxybenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,

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- 2-{4-[2-(4-chlorophenyl)-5-(isopropylcarbamoyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
- 2-{4-[2-(4-chlorophenyl)-5-(N-isopropyl-N-methylcarbamoyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
- 10 2-{4-[2-(4-chlorophenyl)-5-(phenylcarbamoyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-(4-methoxypiperidinocarbonyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-car-boxylic acid hydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-(3-hydroxypropyloxy)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid, 2-{4-[2-(4-chlorophenyl) -5- (2-hydroxyethoxy)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride.
    - methyl 2-[4-(2-bromo-5-nitrobenzyloxy)-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylate,
    - methyl 2-[4-{2-(4-chlorophenyl)-5-nitrobenzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylate,
  - methyl 2-[4-{5-amino-2-(4-chlorophenyl)benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylate,
- methyl 2-[4-(4-chlorophenyl)-5-(2-oxopyrrolidin-1-yl)benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylate,
  - 2-[4-{2-(4-chlorophenyl)-5-(2-oxopyrrolidin-1-yl)benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-(4-methylpiperidin-1-ylcarbonyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-car-boxylic acid hydrochloride.
  - 2-{4-[5-acetyl-2-(4-chlorophenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride, 2-{4-[2-(4-chlorophenyl)-5-{(4-hydroxypiperidin-1-ylcarbonyl)methoxy}benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
  - 2-{4-[2-(4-chlorophenyl)-5-(2-methoxyethoxy)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride.
  - 2-{4-[2-(4-chlorophenyl)-5-{2-(2-methoxyethoxy)ethoxy}benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-(isobutylcarbonyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid, .
  - 2-{4-[2-(4-chlorophenyl)-5-(2-methylthiazol-4-yl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
- 2-{4-[2-(4-chlorophenyl)-5-(3,4-dihydroxypiperidin-1-ylcarbonyl)benzyloxy)phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-(3-methyl-1,2,4-oxadiazol-5-yl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-car-boxylic acid hydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-4-(isopropylcarbamoyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride.
  - 2-{4-[2-(4-chlorophenyl)-4-(piperidinocarbonyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-{(1-hydroxy-2-methylpropan-2-yl)carbamoyl}benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
- 45 2-{4-[2-(4-chlorophenyl)-5-(4,4-dimethyl-2-oxazolin-2-yl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carbox-ylic acid dihydrochloride,
  - $2-\{4-[2-(4-chlorophenyl)-4-(4-hydroxypiperidin-1-ylcarbonyl) benzyloxy] phenyl\}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,\\$
  - 2-{4-[2-(4-chlorophenyl)-4-{(2-hydroxyethyl)carbamoyl}benzyloxy}phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-4-{(4-pyridylmethyl)carbamoyl}benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
  - 2-{4-[2-(4-chlorophenyl)-4-(dimethylcarbamoyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
- <sup>55</sup> 2-{4-[5-(2-aminothiazol-4-yl)-2-(4-chlorophenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid dihydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-(4-hydroxypiperidin-1-ylsulfonyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-car-boxylic acid hydrochloride,

- 2-{4-[5-(dimethylcarbamoyl)-2-(4-fluorophenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
- 2-{4-[5-(dimethylcarbamoyl)-2-(3-fluorophenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
- <sup>5</sup> 2-{4-[2-(5-chlorothiophen-2-yl)-5-(dimethylcarbamoyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,

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- 2-{4-[2-bromo-5-(5-methyloxazol-2-yl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
- 2-{4-[2-bromo-5-(5-methylthiazol-2-yl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-(5-methyloxazol-2-yl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - $\hbox{$2$-$\{4-[2-(4-chlorophenyl)-5-(5-methylthiazol-2-yl)benzyloxy]$phenyl$-1-cyclohexylbenzimidazole-5-carboxylic}\ \ acid\ hydrochloride,$
- 2-{4-[2-(4-chlorophenyl)-5-tetrazol-5-ylbenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  2-{4-[5-chloro-2-(4-cyanophenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  2-{4-[5-chloro-2-(4-tetrazol-5-ylphenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
- <sup>20</sup> 2-{4-[2-(4-chlorophenyl)-5-{2-(4-hydroxypiperidin-1-yl)ethoxy}benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-(2-oxopiperidin-1-yl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-{4-[3-(4-chlorophenyl)-5-(dimethylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride.
  - 2-{4-[2-(4-chlorophenyl)-5-(N-hydroxyamidino)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid dihydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-(2,5-dihydro-5-oxo-4H-1,2,4-oxadiazol-3-yl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
- <sup>30</sup> 2-{4-[2-(4-chlorophenyl)-5-(2-oxo-3H-1,2,3,5-oxathiadiazol-4-yl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-(2,5-dihydro-5-oxo-4H-1,2,4-thiadiazol-3-yl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-(cyclopropylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-(cyclobutylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-(tert-butylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride.
- 2-{4-[2-(4-chlorophenyl)-5-(isobutylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxy-lic acid hydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-{(1-hydroxypropan-2-yl)carbamoyl}benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimi-dazole-5-carboxylic acid hydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-(methoxycarbamoyl)benzyloxy)-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
    - 2-{4-[2-(4-chlorophenyl)-5-{(2,3-dihydroxypropyl)carbamoyl}benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimida-zole-5-carboxylic acid hydrochloride,
    - 2-{4-[2-(4-chlorophenyl)-5-(N-ethyl-N-methylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
- 50 2-{4-[2-(4-chlorophenyl)-5-(N-methyl-N-propylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-(N-isopropyl-N-methylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimida-zole-5-carboxylic acid hydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-(2,6-dimethylpiperidin-1-ylcarbonyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimi-dazole-5-carboxylic acid hydrochloride,
    - 2-{4-[5-(butylcarbamoyl)-2-(4-chlorophenyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
    - 2-{4-[2-(4-chlorophenyl)-5-(propylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxyl-

ic acid hydrochloride.

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- 2-{4-[2-(4-chlorophenyl)-5-(ethylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
- 2-{4-[2-(4-chlorophenyl)-5-{(dimethylcarbamoyl)amino}benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5 5-carboxylic acid hydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-{(morpholinocarbonyl)amino}benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-ureidobenzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
- 10 2-{4-[2-(4-chlorophenyl)-5-{(ethylcarbamoyl)amino}benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-car-boxylic acid hydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-{(isopropylcarbamoyl)amino}benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-{4-[2-(3,4-difluorophenyl)-5-(isopropylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-car-boxylic acid.
    - 2-{4-[2-(2,4-difluorophenyl)-5-(isopropylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
    - 2-{4-[2-(3,5-dichlorophenyl)-5-(isopropylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
- 2-{4-[2-(3-chloro-4-fluorophenyl)-5-(isopropylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-{4-[2-(3,4-dichlorophenyl)-5-(isopropylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride.
  - 2-{4-[2-(4-chloro-2-fluorophenyl)-5-(isopropylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-{4-[2-(4-chloro-2-fluorophenyl)-5-(pyrrolidin-1-ylcarbonyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimida-zole-5-carboxylic acid hydrochloride,
  - 2-{4-[2-(4-chloro-3-fluorophenyl)-5-(pyrrolidin-1-ylcarbonyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimida-zole-5-carboxylic acid hydrochloride.
- 30 2-{4-[2-(4-chloro-3-fluorophenyl)-5-(isopropylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-{4-[2-{4-(methylthio)phenyl}-5-(2-oxopyrrolidin-1-yl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-{4-[2-{4-(methylthio)phenyl}-5-(isopropylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
    - 2-{4-[4-chloro-2-(4-chlorophenyl)-5-(1,1-dioxoisothiazolidin-2-yl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimi-dazole-5-carboxylic acid hydrochloride,
    - 2-{4-[4-chloro-2-(4-chlorophenyl)-5-(2-oxopyrrolidin-1-yl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
- <sup>40</sup> 2-{4-[2-(4-chlorophenyl)-5-(isopropylaminosulfonyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-car-boxylic acid hydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-(dimethylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclopentylbenzimidazole-5-car-boxylic acid hydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-(4-hydroxypiperidin-1-ylcarbonyl)benzyloxy]-2-fluorophenyl}-1-cyclopentylbenzimidazole-5-carboxylic acid hydrochloride,
    - 2-{4-[2-(4-chlorophenyl)-5-(isopropylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclopentylbenzimidazole-5-carboxylic acid hydrochloride.
    - 2-{4-[2-(4-chlorophenyl)-5-(isopropylcarbamoyl)benzyloxy]phenyl}-1-cyclopentylbenzimidazole-5-carboxylic acid hydrochloride,
- 50 2-{4-[2-(4-chlorophenyl)-5-(dimethylcarbamoyl)benzyloxy]phenyl}-1-cyclopentylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-(4-hydroxypiperidin-1-ylcarbonyl)benzyloxy]phenyl}-1-cyclopentylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-(isopropylcarbamoyl)benzyloxy]phenyl}-1-(tetrahydrothiopyran-4-yl)benzimidazole-5-carboxylic acid hydrochloride,
    - 2-{4-[2-(4-chlorophenyl)-5-(pyrrolidin-1-ylcarbonyl)benzyloxy]phenyl}-1-(tetrahydrothiopyran-4-yl)benzimidazole-5-carboxylic acid hydrochloride,
    - 2-{4-[2-(4-chlorophenyl)-5-(isopropylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-(tetrahydrothiopyran-4-yl)benzimi-

dazole-5-carboxylic acid hydrochloride,

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- 2-{4-[2-(4-chlorophenyl)-5-(2-oxopyrrolidin-1-yl)benzyloxy]-2-fluorophenyl}-1-(tetrahydrothiopyran-4-yl)benzimidazole-5-carboxylic acid hydrochloride.
- 2-{4-[2-(4-chlorophenyl)-5-(isopropylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-piperidinobenzimidazole-5-carboxylic acid hydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-(pyrrolidin-1-ylcarbonyl)benzyloxy]-2-fluorophenyl}-1-piperidinobenzimidazole-5-carboxylic acid,
  - 2-{4-[2-(4-chlorophenyl)-5-(2-imidazolin-2-yl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid dihydrochloride,
- 2-{4-[2-(4-chlorophenyl)-5-(2-oxooxazolidin-3-yl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-car-boxylic acid hydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-(2-oxoimidazolidin-1-yl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-car-boxylic acid hydrochloride.
  - 2-{4-[2-(4-chlorophenyl)-5-(2-oxazolin-2-ylamino)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-car-boxylic acid dihydrochloride,
  - 2-{4- [{2-[{(dimethylcarbamoyl)methoxy}methyl]-4-(4-fluorophenyl)thiazol-5-yl}methoxy]phenyl}-1-cyclohexylben-zimidazole-5-carboxylic acid hydrochloride.
    - 2-{4-[{4-(4-fluorophenyl)-2-(4-hydroxypiperidin-1-ylmethyl)thiazol-5-yl}methoxy]phenyl}-1-cyclohexylbenzimida-zole-5-carboxylic acid dihydrochloride,
- 2-{4-[{4-(4-fluorophenyl)-2-[(carbamoylmethoxy)methyl]thiazol-5-yl}methoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-{4-[{4-(4-fluorophenyl)-2-(methylcarbamoyl)thiazol-5-yl}methoxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-{4-[4-(4-fluorophenyl)-2-{(2-hydroxyethyl)carbamoyl}thiazol-5-yl}methoxy]-2-fluorophenyl}-1-cyclohexylbenz-imidazole-5-carboxylic acid hydrochloride,
    - 2-{4-[{2-(4-fluorophenyl)-5-(dimethylcarbamoyl)thiophen-3-yl}methoxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
    - 2-{4-[{2-(4-fluorophenyl)-5-(isopropylcarbamoyl)thiophen-3-yl}methoxy]-2-fluorophenyl}-1-cyclohexylbenzimida-zole-5-carboxylic acid hydrochloride,
- <sup>30</sup> 2-{4-[{2-(4-fluorophenyl)-5-(4-hydroxypiperidin-1-ylcarbonyl)thiophen-3-yl}methoxy]-2-fluorophenyl}-1-cyclohex-ylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-(dimethylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexyl-5-tetrazol-5-ylbenzimidazole,
  - 2-{4-[2-(4-carboxyphenyl)-5-chlorobenzyloxy]-2-fluorophenyl}-1-cyclohexyl-5-tetrazol-5-ylbenzimidazole hydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-(isopropylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexyl-5-(2,5-dihydro-5-oxo-4H-1,2,4-oxadiazol-3-yl)benzimidazole hydrochloride,
  - 2-{4-[5-carboxy-2-(4-chlorophenyl)benzyloxy]-2-fluorophenyl}-5-cyano-1-cyclohexylbenzimidazole,
  - 2-{4-[2-(4-chlorophenyl)-5-(dimethylcarbamoyl)benzyloxy]-2-fluorophenyl}-5-cyano-1-cyclohexylbenzimidazole,
- 40 2-{4-[{N-(4-dimethylcarbamoyl)-N-(4-fluorophenyl)amino}methyl]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
  - 2-{5-[bis(3-fluorophenyl)methyl]-2-fluoro-4-hydroxyphenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
  - 2-{3-[bis(3-fluorophenyl)methyl]-2-fluoro-4-hydroxyphenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
  - 2-{4-[(3-dimethylcarbamoylphenyl)(4-fluorophenyl)methoxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride
  - 2-{4-[{3-(4-hydroxypiperidyl-1-ylcarbonyl)phenyl}(4-fluorophenyl)methoxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - $1-\{[2-\{4-([4-(4-fluorophenyl]-2-methylthiazol-5-yl]methoxy)phenyl\}-1-cyclohexylbenzimidazol-5-yl]carbonyl\}-\beta-D-glucuronic acid,$
- [2-{4-[bis(3-fluorophenyl)methoxy]-2-fluorophenyl}-1-cyclohexylbenzimidazol-5-yl]carbonyl}-β-D-glucuronic acid, 2-{4-[2-(4-chlorophenyl)-5-(1,1-dioxoisothiazolidin-2-yl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - 3-{[4-(5-aminosulfonyl-1-cyclohexylbenzimidazol-2-yl)-3-fluorophenoxy]methyl}-4-(4-chlorophenyl)-N-isopropylbenzamide,
- 55 2-[4-(2-(4-chlorophenyl)-6-(isopropylaminocarbonyl)benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-[4-(2-(4-chlorophenyl)-4-fluoro-5-(1,1-dioxoisothiazolidin-2-yl)benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazale-5-carboxylic acid hydrochloride,

- 2-[4-{2-(4-chlorophenyl)-5-(isopropylaminocarbonyl)benzyloxy}-2-fluorophenyl]-1-cyclohexyl-4-methoxybenzimidazole-5-carboxylic acid hydrochloride.
- 2-[4-{2-(4-chlorophenyl)-5-(N-isopropylcarbonyl-N-methylamino)benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
- 5 2-[4-{2-(4-chlorophenyl)-5-(isopropylcarbonylamino)benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,

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- 2-[3-{[4-(4-fluorophenyl)-2-methylthiazol-5-yl]methyl}-4-hydroxyphenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid,
- 2-[4-{2-(4-chlorophenyl)-4-fluoro-5-(2-oxopyrrolidin-1-yl)benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
- 2-[4-(2-(4-chlorophenyl)-5-(methylsulfonylamino)benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
- 2-[4-{2-(4-chlorophenyl)-5-[N-methyl-N-(methylsulfonyl)amino]benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride.
- 2-[4-{[3-(4-chlorophenyl)-6-(2-oxopyrrolidin-1-yl)pyridin-2-yl]methyloxy}-2-fluorophenyl]-1-cyclohexylbenzimida-zole-5-carboxylic acid hydrochloride,
  - 2-[4-{2-(4-chlorophenyl)-5-(acetylamino)benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-[4-{2-(4-chlorophenyl)-5-(N-acetyl-N-ethylamino)benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-[4-{2-(4-chlorophenyl)-5-(N-acetyl-N-propylamino)benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-[4-{2-(4-chlorophenyl)-5-[N-ethyl-N-(methylsulfonyl)amino]benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
- 2-[4-{2-(4-chlorophenyl)-5-[N-(methylsulfonyl)-N-propylamino]benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-[4-{2-(4-chlorophenyl)-5-(N-acetyl-N-methylamino)benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-[4-{2-(4-chlorophenyl)-5-[N-(ethylsulfonyl)-N-methylamino]benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimida-zole-5-carboxylic acid hydrochloride.
  - 2-[4-{2-(4-chlorophenyl)-5-[N-ethyl-N-(ethylsulfonyl)amino]benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimida-zole-5-carboxylic acid hydrochloride,
  - 2-[4-{2-(4-chlorophenyl)-5-[N-(ethylcarbonyl)-N-methylamino]benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimida-zole-5-carboxylic acid hydrochloride,
- <sup>35</sup> 2-[4-{2-(4-chlorophenyl)-5-[N-ethyl-N-(ethylcarbonyl)amino]benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimida-zole-5-carboxylic acid hydrochloride,
  - 2-[4-{2-(4-chlorophenyl)-5-methoxybenzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid;
  - 2-[4-{2-(4-chlorophenyl)-5-(N-acetyl-N-isopropylamino)-benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
- 40 {[2-{4-[2-(4-chlorophenyl)-5-(2-oxopyrrolidin-1-yl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzoimidazol-5-yl]carbonyl}-β-D-glucuronic acid,
  - $methyl\ 2-\{4-[2-(4-chlorophenyl)-5-methoxybenzyloxy]phenyl\}-1-cyclohexylindole-5-carboxylate,$
  - $\hbox{$2-\{4-[2-(4-chlorophenyl)-5-methoxybenzyloxy]$phenyl$-1-cyclohexyl-1$H-indole-5-carboxylic acid,}\\$
- 2-(4-benzyloxyphenyl)-1-cyclopentyl-1H-indole-5-carboxylic acid, ethyl 2-(4-benzyloxyphenyl)-3-cyclohexylimidazoI1.2-alpvridine-7-carboxylate.
  - 2-(4-benzyloxyphenyl)-3-cyclohexylimidazo[1,2-a]pyridine-7-carboxylic acid,
  - 2-{4-[2-(4-chlorophenyl)-5-methoxybenzyloxy]phenyl}-3-cyclohexyl-3H-imidazo[4,5-b]pyridine-6-carboxylic acid,
  - 2-{4-[2-(4-chlorophenyl)-5-(isopropylcarbamoyl)benzyloxy]phenyl}-3-cyclohexyl-3H-imidazo[4,5-b]pyridine-6-carboxylic acid hydrochloride, and
- <sup>50</sup> 2-{4-[2-(4-chlorophenyl)-5-(pyrrolidin-1-ylcarbonyl)benzyloxy]-phenyl}-3-cyclohexyl-3H-imidazo[4,5-b]pyridine-6-carboxylic acid hydrochloride.
  - **62.** The fused ring compound of claim 61 or a pharmaceutically acceptable salt thereof, which is selected from the group consisting of
- <sup>55</sup> 2-{4-[2-(4-chlorophenyl)-5-(4-oxopiperidinocarbonyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-hydroxybenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride.

- 2-{4-[2-(4-chlorophenyl)-5-(N-isopropyl-N-methylcarbamoyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
- <sup>5</sup> 2-{4-[2-(4-chlorophenyl)-5-(phenylcarbamoyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-(4-methoxypiperidinocarbonyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
- 2-{4-[2-(4-chlorophenyl)-5-(3-hydroxypropyloxy)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid, 2-{4-[2-(4-chlorophenyl)-5-(2-hydroxyethoxy)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride.
  - methyl 2-[4-(2-bromo-5-nitrobenzyloxy)-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylate,
  - methyl 2-[4-{2-(4-chlorophenyl)-5-nitrobenzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylate,
  - methyl 2-[4-{5-amino-2-(4-chlorophenyl)benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylate,
- methyl 2-[4-{2-(4-chlorophenyl)-5-(2-oxopyrrolidin-1-yl)benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylate,
  - $2-[4-\{2-(4-chlorophenyl)-5-(2-oxopyrrolidin-1-yl)benzyloxy\}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,$
  - 2-{4-[2-(4-chlorophenyl)-5-(4-methylpiperidin-1-ylcarbonyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-car-boxylic acid hydrochloride,

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- 2-{4-[5-acetyl-2-(4-chlorophenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride, 2-{4-[2-(4-chlorophenyl)-5-{(4-hydroxypiperidin-1-ylcarbonyl)methoxy}benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
- 2-{4-[2-(4-chlorophenyl)-5-(2-methoxyethoxy)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
- 2-{4-[2-(4-chlorophenyl)-5-{2-(2-methoxyethoxy)ethoxy}benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
- 2-{4-[2-(4-chlorophenyl)-5-(isobutylcarbonyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
- 2-{4-[2-(4-chlorophenyl)-5-(2-methylthiazol-4-yl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
- 2-{4-[2-(4-chlorophenyl)-5-(3,4-dihydroxypiperidin-1-ylcarbonyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-(3-methyl-1,2,4-oxadiazol-5-yl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-4-(isopropylcarbamoyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-4-(piperidinocarbonyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-{(1-hydroxy-2-methylpropan-2-yl)carbamoyl}benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
- <sup>40</sup> 2-{4-[2-(4-chlorophenyl)-5-(4,4-dimethyl-2-oxazolin-2-yl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid dihydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-4-(4-hydroxypiperidin-1-ylcarbonyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-4-{(2-hydroxyethyl)carbamoyl}benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
    - 2-{4-[2-(4-chlorophenyl)-4-{(4-pyridylmethyl)carbamoyl}benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
    - 2-{4-[2-(4-chlorophenyl)-4-(dimethylcarbamoyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
- <sup>50</sup> 2-{4-[5-(2-aminothiazol-4-yl)-2-(4-chlorophenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid dihydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-(4-hydroxypiperidin-1-ylsulfonyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-{4-[5-(dimethylcarbamoyl)-2-(4-fluorophenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
    - 2-{4-[5-(dimethylcarbamoyl)-2-(3-fluorophenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid
    - 2-{4-[2-(5-chlorothiophen-2-yl)-5-(dimethylcarbamoyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxyl-

ic acid hydrochloride.

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- 2-(4-[2-bromo-5-(5-methyloxazol-2-yl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
- 2-{4-[2-bromo-5-(5-methylthiazol-2-yl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-(5-methyloxazol-2-yl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-(5-methylthiazol-2-yl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
- 10 2-{4-[2-(4-chlorophenyl)-5-tetrazol-5-ylbenzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride.
  - $\hbox{$2$-{4-[5-chloro-2-(4-cyanophenyl)benzyloxy]$phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,}\\$
  - 2-{4-[5-chloro-2-(4-tetrazol-5-ylphenyl)benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
- 2-{4-[2-(4-chlorophenyl)-5-{2-(4-hydroxypiperidin-1-yl)ethoxy}benzyloxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-(2-oxopiperidin-1-yl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-{4-[3-(4-chlorophenyl)-5-(dimethylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-(N-hydroxyamidino)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxy-lic acid dihydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-(2,5-dihydro-5-oxo-4H-1,2,4-oxadiazol-3-yl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
- 25 2-{4-[2-(4-chlorophenyl)-5-(2-oxo-3H-1,2,3,5-oxathiadiazol-4-yl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-(2,5-dihydro-5-oxo-4H-1,2,4-thiadiazol-3-yl)benzyloxy]-2-fluorophenyl}-1-cyclohexyl-benzimidazole-5-carboxylic acid hydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-(cyclopropylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-(cyclobutylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-(tert-butylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
- <sup>35</sup> 2-{4-[2-(4-chlorophenyl)-5-(isobutylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxy-lic acid hydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-{(1-hydroxypropan-2-yl)carbamoyl}benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-(methoxycarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride.
  - 2-{4-[2-(4-chlorophenyl)-5-{(2,3-dihydroxypropyl)carbamoyl}benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-(N-ethyl-N-methylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
- 45 2-{4-[2-(4-chlorophenyl)-5-(N-methyl-N-propylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-(N-isopropyl-N-methylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimida-zole-5-carboxylic acid hydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-(2,6-dimethylpiperidin-1-ylcarbonyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimi-dazole-5-carboxylic acid hydrochloride,
  - 2-{4-[5-(butylcarbamoyl)-2-(4-chlorophenyl)benzyloxyl-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-(propylcarbamoyl)benzyloxy}-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
- <sup>55</sup> 2-{4-[2-(4-chlorophenyl)-5-(ethylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-{(dimethylcarbamoyl)amino}benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,

- $2-\{4-[2-(4-chlorophenyl)-5-\{(morpholinocarbonyl)amino\}benzyloxy]-2-fluorophenyl\}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,$
- 2-{4-[2-(4-chlorophenyl)-5-ureidobenzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
- 5 2-{4-[2-(4-chlorophenyl)-5-{(ethylcarbamoyl)amino}benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-{(isopropylcarbamoyl)amino}benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride.
- 2-{4-[2-(3,4-difluorophenyl)-5-(isopropylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-car-boxylic acid,
  - 2-{4-[2-(2,4-difluorophenyl)-5-(isopropylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-car-boxylic acid hydrochloride,
  - 2-{4-[2-(3,5-dichlorophenyl)-5-(isopropylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
- 2-{4-[2-(3-chloro-4-fluorophenyl)-5-(isopropylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,

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- $\hbox{$2-\{4-[2-(3,4-dichlorophenyl)-5-(isopropylcarbamoyl)benzyloxy]-2-fluorophenyl\}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,}$
- 2-{4-[2-(4-chloro-2-fluorophenyl)-5-(isopropylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride.
  - 2-{4-[2-(4-chloro-2-fluorophenyl)-5-(pyrrolidin-1-ylcarbonyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimida-zole-5-carboxylic acid hydrochloride.
- 2-{4-[2-(4-chloro-3-fluorophenyl)-5-(pyrrolidin-1-ylcarbonyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
- 2-{4-[2-(4-chloro-3-fluorophenyl)-5-(isopropylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-{4-[2-{4-(methylthio)phenyl}-5-(2-oxopyrrolidin-1-yl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-{4-[2-{4-(methylthio)phenyl}-5-(isopropylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride.
    - 2-{4-[4-chloro-2-(4-chlorophenyl)-5-(1,1-dioxoisothiazolidin-2-yl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
    - $\hbox{$2-\{4-[4-chloro-2-(4-chlorophenyl)-5-(2-oxopyrrolidin-1-yl)$benzyloxy]-2-fluorophenyl\}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,}$
- 2-{4-[2-(4-chlorophenyl)-5-(isopropylaminosulfonyl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-car-boxylic acid hydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-(dimethylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclopentylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-(4-hydroxypiperidin-1-ylcarbonyl)benzyloxy]-2-fluorophenyl}-1-cyclopentylbenzimida-zole-5-carboxylic acid hydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-(isopropylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclopentylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-{4-[2-(4-chlorophenyl) -5-(isopropylcarbamoyl)benzyloxy]phenyl}-1-cyclopentylbenzimidazole-5-carboxylic acid hydrochloride,
- 2-{4-[2- (4-chlorophenyl) -5- (dimethylcarbamoyl)benzyloxy]phenyl}-1-cyclopentylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-(4-hydroxypiperidin-1-ylcarbonyl)benzyloxy]phenyl}-1-cyclopentylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-(isopropylcarbamoyl)benzyloxy]phenyl}-1-(tetrahydrothiopyran-4-yl)benzimidazole-5-carboxylic acid hydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-(pyrrolidin-1-ylcarbonyl)benzyloxy]phenyl}-1-(tetrahydrothiopyran-4-yl)benzimidazole-5-carboxylic acid hydrochloride.
  - 2-{4-[2-(4-chlorophenyl)-5-(isopropylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-(tetrahydrothiopyran-4-yl)benzimidazole-5-carboxylic acid hydrochloride,
- 2-{4-[2-(4-chlorophenyl)-5-(2-oxopyrrolidin-1-yl)benzyloxy]-2-fluorophenyl}-1-(tetrahydrothiopyran-4-yl)benzimi-dazole-5-carboxylic acid hydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-(isopropylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-piperidinobenzimidazole-5-carboxylic acid hydrochloride,

- 2-{4-[2-(4-chlorophenyl)-5-(pyrrolidin-1-ylcarbonyl)benzyloxy]-2-fluorophenyl}-1-piperidinobenzimidazole-5-car-boxylic acid.
- 2-{4-[2-(4-chlorophenyl)-5-(2-imidazolin-2-yl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid dihydrochloride,
- 5 2-{4-[2-(4-chlorophenyl)-5-(2-oxooxazolidin-3-yl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,

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- 2-{4-[2-(4-chlorophenyl)-5-(2-oxoimidazolidin-1-yl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-car-boxylic acid hydrochloride,
- 2-{4-[2-(4-chlorophenyl)-5-(2-oxazolin-2-ylamino)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-car-boxylic acid dihydrochloride,
- 2-{4-[{2-{(dimethylcarbamoyl) methoxy}methyl]-4-(4-fluorophenyl)thiazol-5-yl}methoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride, 2-{4-[{4-(4-fluorophenyl)-2-(4-hydroxypiperidin-1-ylmethyl)thiazol-5-yl}methoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid dihydrochloride,
- 2-{4-[{4-(4-fluorophenyl)-2-[(carbamoylmethoxy)methyl]thiazol-5-yl}methoxy]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
- 2-{4-[{4-(4-fluorophenyl)-2-(methylcarbamoyl)thiazol-5-yl}methoxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
- 2-{4-[{4-(4-fluorophenyl)-2-{(2-hydroxyethyl)carbamoyl}thiazol-5-yl}methoxy]-2-fluorophenyl}-1-cyclohexylbenz-imidazole-5-carboxylic acid hydrochloride,
- 2-{4-[{2-(4-fluorophenyl)-5-(dimethylcarbamoyl)thiophen-3-yl}methoxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-{4-[{2-(4-fluorophenyl)-5-(isopropylcarbamoyl)thiophen-3-yl }methoxy]-2-fluorophenyl}-1-cyclohexylbenzimida-zole-5-carboxylic acid hydrochloride,
  - 2-{4-[{2-(4-fluorophenyl)-5-(4-hydroxypiperidin-1-ylcarbonyl)thiophen-3-yl}methoxy]-2-fluorophenyl}-1-cyclohex-ylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-{4-[2-(4-chlorophenyl)-5-(dimethylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexyl-5-tetrazol-5-ylbenzimidazole,
  - 2-{4-[2-(4-carboxyphenyl)-5-chlorobenzyloxy]-2-fluorophenyl}-1-cyclohexyl-5-tetrazol-5-ylbenzimidazole hydrochloride.
- 30 2-{4-[2-(4-chlorophenyl)-5-(isopropylcarbamoyl)benzyloxy]-2-fluorophenyl}-1-cyclohexyl-5-(2,5-dihydro-5-oxo-4H-1,2,4-oxadiazol-3-yl)benzimidazole hydrochloride,
  - 2-{4-[5-carboxy-2-(4-chlorophenyl)benzyloxy]-2-fluorophenyl}-5-cyano-1-cyclohexylbenzimidazole,
  - 2-{4-[2-(4-chlorophenyl)-5-(dimethylcarbamoyl)benzyloxy]-2-fluorophenyl}-5-cyano-1-cyclohexylbenzimidazole,
  - 2-{4-[{N-(4-dimethylcarbamoyl)-N-(4-fluorophenyl)amino}-methyl]phenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
  - 2-{5-[bis(3-fluorophenyl)methyl]-2-fluoro-4-hydroxyphenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
  - 2-{3-[bis(3-fluorophenyl)methyl]-2-fluoro-4-hydroxyphenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid,
  - 2-{4-[(3-dimethylcarbamoylphenyl)(4-fluorophenyl)methoxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
- 40 2-{4-[{3-(4-hydroxypiperidyl-1-ylcarbonyl)phenyl}(4-fluorophenyl)methoxy]-2-fluorophenyl}-1-cyclohexylbenzimi-dazole-5-carboxylic acid hydrochloride.
  - $1-\{[2-\{4-([4-(4-fluorophenyl)-2-methylthiazol-5-yl]methoxy)phenyl\}-1-cyclohexylbenzimidazol-5-yl]carbonyl\}-\beta-D-glucuronic acid,$
- {[2-{4-[bis(3-fluorophenyl)methoxy]-2-fluorophenyl}-1-cyclohexylbenzimidazol-5-yl]carbonyl}-β-D-glucuronic acid, 2-{4-[2-(4-chlorophenyl)-5-(1,1-dioxoisothiazolidin-2-yl)benzyloxy]-2-fluorophenyl}-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - 3-{[4-(5-aminosulfonyl-1-cyclohexylbenzimidazol-2-yl)-3-fluorophenoxy]methyl}-4-(4-chlorophenyl)-N-isopropylbenzamide,
  - 2-[4-{2-(4-chlorophenyl)-6-(isopropylaminocarbonyl)benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-[4-{2-(4-chlorophenyl)-4-fluoro-5-(1,1-dioxoisothiazolidin-2-yl)benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-[4-{2-(4-chlorophenyl)-5-(isopropylaminocarbonyl)benzyloxy}-2-fluorophenyl]-1-cyclohexyl-4-methoxybenzimidazole-5-carboxylic acid hydrochloride,
- <sup>55</sup> 2-[4-(2-(4-chlorophenyl)-5-(N-isopropylcarbonyl-N-methylamino)benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzim-idazole-5-carboxylic acid hydrochloride,
  - 2-[4-{2-(4-chlorophenyl)-5-(isopropylcarbonylamino)benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,

- 2-[3-{[4-(4-fluorophenyl)-2-methylthiazol-5-yl)methyl}-4-hydroxyphenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid, 2-[4-{2-(4-chlorophenyl)-4-fluoro-5-(2-oxopyrrolidin-1-yl)benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
- 2-[4-{2-(4-chlorophenyl)-5-(methylsulfonylamino)benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride.

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- 2-[4-{2-(4-chlorophenyl)-5-[N-methyl-N-(methylsulfonyl)amino]benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride.
- $2-[4-\{[3-(4-chlorophenyl)-6-(2-oxopyrrolidin-1-yl)pyridin-2-yl]methyloxy\}-2-fluorophenyl]-1-cyclohexylbenzimida-zole-5-carboxylic acid hydrochloride,$
- 2-[4-{2-(4-chlorophenyl)-5-(acetylamino)benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - 2-[4-{2-(4-chlorophenyl)-5-(N-acetyl-N-ethylamino)benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-car-boxylic acid hydrochloride,
  - 2-[4-{2-(4-chlorophenyl)-5-(N-acetyl-N-propylamino)benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
- 2-[4-{2-(4-chlorophenyl)-5-[N-ethyl-N-(methylsulfonyl)amino]-benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimida-zole-5-carboxylic acid hydrochloride,
  - 2-[4-{2-(4-chlorophenyl)-5-[N-(methylsulfonyl)-N-propylamino]benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
- 20 2-[4-{2-(4-chlorophenyl)-5-(N-acetyl-N-methylamino)benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - $\hbox{$2$-[4-{2-(4-chlorophenyl)-5-[N-(ethylsulfonyl)-N-methylamino]benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,}$
  - 2-[4-{2-(4-chlorophenyl)-5-[N-ethyl-N-(ethylsulfonyl)amino]benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimida-zole-5-carboxylic acid hydrochloride.
    - 2-[4-{2-(4-chlorophenyl)-5-[N-(ethylcarbonyl)-N-methylamino]benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimida-zole-5-carboxylic acid hydrochloride,
    - $2-[4-\{2-(4-chlorophenyl)-5-[N-ethyl-N-(ethylcarbonyl)amino] benzyloxy\}-2-fluorophenyl]-1-cyclohexylbenzimida-zole-5-carboxylic acid hydrochloride,$
- 2-[4-{2-(4-chlorophenyl)-5-methoxybenzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid, 2-[4-{2-(4-chlorophenyl)-5-(N-acetyl-N-isopropylamino)benzyloxy}-2-fluorophenyl]-1-cyclohexylbenzimidazole-5-carboxylic acid hydrochloride,
  - $\label{eq:constraint} $$ \{[2-\{4-[2-(4-chlorophenyl]-5-(2-oxopyrrolidin-1-yl)benzyloxy]-2-fluorophenyl\}-1-cyclohexylbenzoimidazol-5-yl]carbonyl\\ -\beta-D-glucuronic acid,$
- 2-{4-[2-(4-chlorophenyl)-5-(isopropylcarbamoyl)benzyloxy]phenyl}-3-cyclohexyl-3H-imidazo[4,5-b]pyridine-6-carboxylic acid hydrochloride, and
  - 2-{4-[2-(4-chlorophenyl)-5-(pyrrolidin-1-ylcarbonyl)benzyloxy]phenyl}-3-cyclohexyl-3H-imidazo[4,5-b]pyridine-6-carboxylic acid hydrochloride.
- 40 63. A pharmaceutical composition comprising a fused ring compound of any of claims 29 to 62, or a pharmaceutically acceptable salt thereof, and a pharmaceutically acceptable carrier.
  - **64.** A hepatitis C virus polymerase inhibitor comprising a fused ring compound of any of claims 1 to 28 and 29 to 62, or a pharmaceutically acceptable salt thereof, and a pharmaceutically acceptable carrier.
  - 65. An anti-hepatitis C virus agent comprising a fused ring compound of any of claims 1 to 28 and 29 to 62, or a pharmaceutically acceptable salt thereof, and a pharmaceutically acceptable carrier.
- 66. A therapeutic agent for hepatitis C comprising a fused ring compound of any of claims 29 to 62, or a pharmaceutically acceptable salt thereof, and a pharmaceutically acceptable carrier.
  - 67. An anti-hepatitis C virus agent comprising (a) the anti-hepatitis C virus agent of claim 65 and (b) at least one agent selected from the group consisting of a different antiviral agent, an antiinflammatory agent and an immunostimulant.
- 68. An anti-hepatitis C virus agent comprising (a) the anti-hepatitis C virus agent of claim 65 and (b) interferon.
  - 69. A therapeutic agent for hepatitis C comprising (a) the hepatitis C virus polymerase inhibitor of claim 64 and (b) at least one agent selected from the group consisting of a different antiviral agent, an antiinflammatory agent and an

immunostimulant.

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- 70. A therapeutic agent for hepatitis C comprising (a) the hepatitis C virus polymerase inhibitor of claim 64 and (b) interferon.
- 71. A benzimidazole compound of the following formula [III]

$$R^{a36}0 \xrightarrow{N} R^{a38} OH \qquad [111]$$

wherein R<sup>a36</sup> is hydrogen atom or carboxyl-protecting group, R<sup>a37</sup> is cyclopentyl or cyclohexyl, and R<sup>a38</sup> is hydrogen atom or fluorine atom, or a salt thereof.

- 72. A thiazole compound selected from the group consisting of 4-(4-fluorophenyl)-5-hydroxymethyl-2-methylthiazole and 4-(4-fluorophenyl)-5-chloromethyl-2-methylthiazole, or a pharmaceutically acceptable salt thereof.
  - 73. A biphenyl compound selected from the group consisting of 1-(4'-chloro-2-hydroxymethyl-biphenyl-4-yl)-2-pyrrolidinone and 1-(4'-chloro-2-chloromethyl-biphenyl-4-yl)-2-pyrrolidinone, or a pharmaceutically acceptable salt thereof.
  - 74. A pharmaceutical composition comprising (a) a fused ring compound of the formula [I] of claim 1 or a pharmaceutically acceptable salt thereof and (b) at least one agent selected from the group consisting of an antiviral agent other than the compound of claim 1, an antiinflammatory agent and an immunostimulant.
  - **75.** A pharmaceutical composition comprising (a) a fused ring compound of the formula [I] of claim 1 or a pharmaceutically acceptable salt thereof and (b) interferon.
- 76. A method for treating hepatitis C, which comprises administering an effective amount of a fused ring compound of the formula [I] of claim 1 or a pharmaceutically acceptable salt thereof.
  - 77. The method of claim 76, further comprising administering an effective amount of at least one agent selected from the group consisting of an antiviral agent other than the compound of claim 1, an antiinflammatory agent and an immunostimulant.
  - 78. The method of claim 76, further comprising administering an effective amount of interferon.
  - 79. A method for inhibiting hepatitis C virus polymerase, which comprises administering an effective amount of a fused ring compound of the formula [I] of claim 1 or a pharmaceutically acceptable salt thereof.
  - 80. The method of claim 79, further comprising administering an effective amount of at least one agent selected from the group consisting of an antiviral agent other than the compound of claim 1, an antiinflammatory agent and an immunostimulant.
- 50 81. The method of claim 79, further comprising administering an effective amount of interferon.
  - 82. Use of a fused ring compound of the formula [I] of claim 1 or a pharmaceutically acceptable salt thereof for the production of a pharmaceutical agent for treating hepatitis C.
- 83. Use of a fused ring compound of the formula [I] of claim 1 or a pharmaceutically acceptable salt thereof for the production of a hepatitis C virus polymerase inhibitor.
  - 84. A pharmaceutical composition for the treatment of hepatitis C, which comprises a fused ring compound of the

formula [I] of claim 1 or a pharmaceutically acceptable salt thereof, and a pharmaceutically acceptable carrier.

- **85.** A pharmaceutical composition for inhibiting hepatitis C virus polymerase, which comprises a fused ring compound of the formula [I] of claim 1 or a pharmaceutically acceptable salt thereof, and a pharmaceutically acceptable carrier.
- 86. A commercial package comprising a pharmaceutical composition of claim 84 and a written matter associated therewith, the written matter stating that the pharmaceutical composition can or should be used for treating hepatitis C.
- 87. A commercial package comprising a pharmaceutical composition of claim 85 and a written matter associated therewith, the written matter stating that the pharmaceutical composition can or should be used for inhibiting hepatitis C virus polymerase.

#### INTERNATIONAL SEARCH REPORT

International application No.

#### PCT/JP02/06405 A. CLASSIFICATION OF SUBJECT MATTER Int.Cl<sup>7</sup> A61K31/4184, 31/4439, 31/42, 31/4523, 31/496, 31/55, 31/427, 31/506, 31/437, C07D235/18, 235/30, 409/12, 401/12, 413/12, 401/04, 403/12, 417/12, 405/12, 471/04, A61P31/12, 1/16, 43/00 According to International Patent Classification (IPC) or to both national classification and IPC B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) Int.Cl<sup>7</sup> A61K31/4184, 31/4439, 31/42, 31/4523, 31/496, 31/55, 31/427, 31/506, 31/437, C07D235/18, 235/30, 409/12, 401/12, 413/12, 401/04, 403/12, 417/12, 405/12, 471/04, A61P31/12, 1/16, 43/00 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Jitsuyo Shinan Koho 1940-1992 Toroku Jitsuyo Shinan Koho 1994-1996 1971-1992 Jitsuyo Shinan Toroku Koho Kokai Jitsuyo Shinan Koho 1996-2002 Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) CAPLUS(STN), REGISTRY(STN) C. DOCUMENTS CONSIDERED TO BE RELEVANT Category\* Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No. JP 06-025182 A (Kanebo, Ltd.), 86,87 Y 01 February, 1994 (01.02.94), 74,75 (Family: none) Α 1-73,82-85 EP 507650 Al (Synthelabo S.A.), X 86,87 07 October, 1992 (07.10.92), 74,75 Y & US 5280030 A Α & JP 05-112563 A2 1-73,82-85 х EP 10063 A2 (Ciba-Geigy A.-G.), 86,87 16 April, 1980 (16.04.80), Y 74,75 & JP 55-049374 A A 1-73,82-85 X Kataev, V.A. et al., Preparation and immunomodula 86,87 ting effect of (1-thietanyl-3)benzimidazoles., 74,75 Khimiko-Farmatsevticheskii Zhurnal, Vol.30, No.7 1-73,82-85 (1996), pages 22 to 24 × Further documents are listed in the continuation of Box C. See patent family annex. Special categories of cited documents: document defining the general state of the art which is not considered to be of particular relevance later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention document of particular relevance; the claimed invention cannot be earlier document but published on or after the international filing considered novel or cannot be considered to involve an inventive step when the document is taken alone document which may throw doubts on priority claim(s) or which is document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combined with one or more other such documents, such combination being obvious to a person skilled in the art cited to establish the publication date of another citation or other special reason (as specified) document referring to an oral disclosure, use, exhibition or other document published prior to the international filing date but later document member of the same patent family than the priority date claimed Date of the actual completion of the international search Date of mailing of the international search report 02 September, 2002 (02.09.02) 17 September, 2002 (17.09.02) Name and mailing address of the ISA/ Authorized officer Japanese Patent Office

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Telephone No.

# INTERNATIONAL SEARCH REPORT

International application No.
PCT/JP02/06405

	ation). DOCUMENTS CONSIDERED TO BE RELEVANT	
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No
Y	WO 99/24060 Al (Mayo Foundation for Medical Education and Research), 20 May, 1999 (20.05.99), & EP 1028745 A & JP 2001-522811 A	74,75
Y	WO 97/41884 A1 (Pharma Pacific PTY. Ltd.), 13 November, 1997 (13.11.97), & EP 906119 A & US 5997858 A & JP 12-505478 A	74,75
P,X	WO 01/47883 A1 (Japan Tobacco Inc.), 05 July, 2001 (05.07.01), & EP 1162196 A1 & JP 2001-247550 A	1-75,82-87
P,X	WO 02/04425 A2 (Boehringer Ingelheim Ltd.), 17 January, 2002 (17.01.02), & US 2002065418 A	1-75,82-87
A	WO 96/07646 A1 (Wellcome Foundation Ltd.), 14 March, 1996 (14.03.96), & US 5534535 A & EP 779885 A1 & JP 10-505092 A	1-75,82-87
A	WO 97/25316 A1 (Glaxo Group Ltd.) 17 July, 1997 (17.07.97), & EP 886635 A1 & JP 2000-503017 A & US 5998398 A	1-75,82-87
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## INTERNATIONAL SEARCH REPORT

International application No.
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Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)		
This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:		
1.   Claims Nos.: 76-81  because they relate to subject matter not required to be searched by this Authority, namely:  Claims 76 to 81 pertain to methods for treatment of the human body by therapy and thus relate to a subject matter which this International Searching		
Authority is not required, under the provisions of Article 17(2)(a)(i) of the PCT and Rule 39.1(iV) of the Regulations under the PCT, to search.  2.  \text{Claims Nos.:}		
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:		
Claims Nos.:  because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).		
Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)		
This International Searching Authority found multiple inventions in this international application, as follows:  Since the invention as set forth in claim 71 and the inventions as set forth in claims 72 and 73 relate to intermediates in different parts of the invention as set forth in claim 29, these inventions are not regarded as having a common technical feature.		
As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.		
2. X As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.		
3. As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:		
4. No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:		
Remark on Protest		

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## INTERNATIONAL SEARCH REPORT

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Claims 1 to 5, 11 to 28, 74, 75 and 82 to 87 involve a great number of compounds in the scopes thereof. However, only parts of the claimed compounds are supported by the description in the meaning as defined in PCT Article 6 and disclosed therein in the meaning as defined in PCT Article 5.

Such being the case, this search has been made on the parts supported by the description and disclosed therein, i.e., the compounds as set forth in claims 6 to 10 and 29 to 73.

Form PCT/ISA/210 (extra sheet) (July 1998)